Form 1 Page 1 Execution Page	**UNITED STATES SECURITIES AND EXCHANGE COMMISSION** **WASHINGTON, D.C. 20549** **APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR, REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANGE ACT**	Date filed (MM/DD/YY): 06/14/19	OFFICIAL USE ONLY

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

INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACTS MAY CONSTITUTE CRIMINAL VIOLATIONS

☐ APPLICATION ☒ AMENDMENT

1. State the name of the applicant: MIAX PEARL, LLC

2. Provide the applicant's primary street address (Do not use a P.O. Box): 7 Roszel Road, Suite 5-A, Princeton, NJ 08540

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

4. Provide the applicant's business telephone and facsimile number:
Telephone: 609-897-7300; Facsimile: 609-987-2210

5. Provide the name, title and telephone number of a contact employee:
Barbara J. Comly, EVP, General Counsel & Corporate Secretary
609-897-7315

6. Provide the name and address of counsel for the applicant:
Barbara J. Comly, EVP, General Counsel & Corporate Secretary
MIAX PEARL, LLC
7 Roszel Road, Suite 5-A
Princeton, NJ 08540

7. Provide the date applicant's fiscal year ends: December 31

8. Indicate legal status of applicant: ☐ Corporation ☐ Sole Proprietorship ☐ Partnership
☒ Limited Liability Company ☐ Other (specify):

If other than a sole proprietor, indicate the date and place where applicant obtained its legal status (e.g. state where incorporated, place where partnership agreement was filed or where applicant entity was formed):

(a) Date (MM/DD/YY): 02/11/16 (b) State/Country of formation: Delaware

(c) Statute under which applicant was organized: Delaware Limited Liability Company Act, 6 Del. C. 18-1d et seq.

SEC Mail Processing Section
JUN 17 2019
Washington DC
408

Securities and Exchange Commission
Trading and Markets

JUN 17 2019
RECEIVED

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

MIAX PEARL, LLC

Date: June 14, 2019

By: Barbara J. Comly
EVP, General Counsel & Corporate Secretary

Subscribed and sworn before me this 14th day of June, 2019.

Jane Post
Notary Public of the State of New Jersey
My Commission Expires October 27, 2019

19003663

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

SEC
Mail Processing
Section
JUN 17 2019
Washington DC
408

Barbara J. Comly
General Counsel

7 Roszel Road, 5th Floor
Princeton, New Jersey 08540
T 609 897 7300
F 609 987 2210
bcomly@miami-holdings.com

June 14, 2019

VIA FEDERAL EXPRESS

Jeannette Marshall
Division of Trading and Markets
Office of Market Supervision
Securities and Exchange Commission
100 F. Street, N.E.
Washington, D.C. 20549

Securities and Exchange Commission
Trading and Markets

JUN 17 2019

RECEIVED

Re: MIAX PEARL, LLC ("PEARL")
Amendment 2019-5 to Form 1 Application

Dear Ms. Marshall:

Enclosed for official filing pursuant to Rules 6a-2(c) are an original and two copies of Amendment 2019-5 to the Form 1 Application of PEARL, which includes the following:

Exhibits A, B, C & J – Triennial filing pursuant to Rule 6a-2(c)

Please do not hesitate to contact me if you have any questions in connection with this matter.

Very truly yours,

Barbara J. Comly
EVP, General Counsel & Corporate Secretary

Enclosures
cc: Marlene Olsen

MIAX PEARL, LLC
("PEARL")

Form 1 Amendment No. 2019-5
Triennial Filing

June 14, 2019

EXHIBIT A	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.
EXHIBIT B	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.
EXHIBIT C	Information relating to each subsidiary or affiliate of the applicant, and of 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.
EXHIBIT J	A list of the officers, governors, members of all standing committees, or persons performing similar functions for the applicant.

Exhibit A

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:

The following materials are submitted by MIAX PEARL, LLC ("PEARL" or the "Exchange") in response to this Exhibit A:

1. The Certificate of Formation of MIAX PEARL, LLC dated February 11, 2016, is attached.

2. The Limited Liability Company Agreement of MIAX PEARL, LLC dated March 7, 2016, is attached.

3. The Amended and Restated Limited Liability Company Agreement of MIAX PEARL, LLC dated December 5, 2016, is attached.

4. The By-Laws of MIAX PEARL, LLC dated December 5, 2016, are attached.

State of Delaware
Secretary of State
Division of Corporations
Delivered 09:51 AM 02/11/2016
FILED 09:51 AM 02/11/2016
SR 20160742764 - File Number 5880323

CERTIFICATE OF FORMATION

OF

MIAX PEARL, LLC

THIS IS TO CERTIFY that there is hereby formed a limited liability company under and by virtue of the Delaware Limited Liability Company Act (the "Act") (6 Del. C. §18-101, et.seq.).

1. The name of the limited liability company is **MIAX PEARL, LLC** (the "Company").

2. The address of the registered office of the Company in the State of Delaware is 1209 Orange Street in the City of Wilmington, County of New Castle, ZIP Code 19801, and the name of the registered agent at such address for service of process is The Corporation Trust Company.

3. This Certificate shall be effective upon filing.

4. The duration of this limited liability company will be perpetual.

IN WITNESS WHEREOF, the undersigned, an authorized person, has signed this certificate this 11th day of February, 2016.

Barbara J. Comly

BARBARA J. COMLY
7 Roszel Road, 5th Floor
Princeton, NJ 08540

LIMITED LIABILITY COMPANY AGREEMENT
OF
MIAX PEARL, LLC

The undersigned is executing this Limited Liability Company Agreement (the "Agreement") as of March 7, 2016 for the purpose of forming a limited liability company (the "Company") pursuant to the provisions of the Delaware Limited Liability Company Act, 6 Del. C. § 18-101 et seq., as amended from time to time (the "Act"), and does hereby agree as follows:

1. **Formation.** A certificate of formation of the Company (the "Certificate") was executed and filed with the Office of the Secretary of State of the State of Delaware on February 11, 2016.

2. **Name.** The name of the limited liability company shall be **"MIAX PEARL, LLC"**, or such other name as the Member may from time to time hereafter designate.

3. **Definitions.** Capitalized terms not otherwise defined herein shall have the meanings set forth therefor in Section 18-101 of the Act.

4. **Purpose.** The Company is formed for the purpose of engaging in any lawful business permitted by the Act or the laws of any jurisdiction in which the Company may do business. The Company shall have the power to engage in all activities and transactions which the Member deems necessary or advisable in connection with the foregoing.

5. **Offices.** The principal place of business and office of the Company shall be located at, and the Company's business shall be conducted from, such place or places as the Member may designate from time to time.

The registered office of the Company in the State of Delaware shall be located at c/o The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801. The name and address of the registered agent of the Company for service of process on the Company in the State of Delaware shall The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801. The Member may from time to time change the registered agent or office by an amendment to the certificate of formation of the Company.

6. **Member.** Miami International Holdings, Inc. is the sole member of the Company (the "Member") holding 100% of the membership interests of the Company. The name and business or residence address of the Member is 7 Roszel Road, 5th Floor, Princeton, NJ 08504.

7. **Term.** The term of the Company shall commence on the date of filing of the certificate of formation of the Company in accordance with the Act and shall continue until the Company is dissolved and its affairs are wound up in accordance with Section 17 of this Agreement and a certificate of cancellation is filed in accordance with the Act.

8. **Board of Directors; Delegation of Authority and Duties.**

(a) Member and Board of Directors. The Member, acting through the Board (defined below), shall manage and control the business and affairs of the Company, and shall possess all rights and powers as provided in the Act and otherwise by law. Except as otherwise expressly provided for herein, the Member hereby consents to the exercise by the Board of all such powers and rights conferred on them by the Act with respect to the management and control of the Company. Notwithstanding the foregoing and except as explicitly set forth in this Agreement, if a vote, consent or approval of the Member is required by the Act or other applicable law with respect to any act to be taken by the Company or matter considered by the Board, the Member agrees that it shall be deemed to have consented to or approved such act or voted on such matter in accordance with a vote of the Board on such act or matter.

(b) Delegation by Board. The Board shall have the power and authority to delegate to one or more other persons the Board's rights and powers to manage and control the business and affairs of the Company, including to delegate to agents and employees of the Member, a Director (as defined below) or the Company (including Officers), and to delegate by a management agreement or another agreement with, or otherwise to, other persons. The Board may authorize any person (including, without limitation, the Member or any Officer or Director) to enter into and perform under any document on behalf of the Company.

(c) Committees. The Board may, from time to time, designate one or more committees, each of which shall be comprised of at least two Directors. Any such committee, to the extent provided in the enabling resolution and until dissolved by the Board, shall have and may exercise any or all of the authority of the Board. At every meeting of any such committee, the presence of a majority of all the representatives thereof shall constitute a quorum, and the affirmative vote of a majority of the representatives present shall be necessary for the adoption of any resolution. The Board may dissolve any committee at any time, unless otherwise provided in this Agreement.

9. **Establishment of Board of Directors.**

(a) Directors. There shall be established a Board of Directors (the "Board") composed of not less than (1) and no more than twenty-one (21) persons as determined from time to time by the Member ("Directors"), each of whom shall be elected by the Member. Any Director may be removed from the Board at any time by the Member. Each Director shall remain in office until his or her death, resignation or removal. In the event of death, resignation or removal of a Director, the party or parties, as applicable, which appointed such Director shall fill the vacancy created. Notwithstanding anything in this Agreement to the contrary, Directors shall not be deemed to be "members" or "managers" (as such terms are defined in the Act) of the Company.

(b) No Individual Authority. No Director has the authority or power to act for or on behalf of the Company, to do any act that would be binding on the Company or to make any expenditures or incur any obligations on behalf of the Company or authorize any of the foregoing, other than acts that are authorized by the Board.

(c) Chairman. The Board shall designate a Director to serve as chairman. The chairman shall, unless a majority of Directors present determine otherwise, preside at all meetings of the Board. If the chairman is absent at any meeting of the Board, a majority of the Directors present shall designate another Director to serve as interim chairman for that meeting.

10. **Officers**. The Member may, from time to time as it deems advisable, designate natural persons as officers of the Company (the "Officers") or successor Officers of the Company and assign titles to any such person. Unless the Member decides otherwise, if the title is one commonly used for officers of a business corporation formed under the Delaware General Corporation Law, the assignment of such title shall constitute the delegation to such person of the authorities and duties that are normally associated with that office. Any delegation pursuant to this Section 8 may be revoked at any time by the Member. An Officer may be removed with or without cause at any time by the Member.

11. **Advisory Board**. The Member may appoint any person or persons to act in an advisory capacity to the Company. Such a group shall be known as the Advisory Board.

12. **Capital Contributions**. The Member shall make capital contributions to the Company from time to time, which amounts shall be set forth in the books and records of the Company.

13. **Transfers of Member Interest**. The Member may sell, assign, pledge or otherwise transfer or encumber (collectively, a "Transfer") any of its Limited Liability Company Interest in the Company to any Person so long as such Transfer is in writing.

14. **Resignation**. The Member shall have the right to resign from the Company so long as such resignation is in writing. The provisions hereof with respect to distributions upon resignation are exclusive and no Member shall be entitled to claim any further or different distribution upon resignation under Section 18-604 of the Act or otherwise.

15. **Allocations and Distributions**. Distributions of cash or other assets of the Company shall be made at such times and in such amounts as the Member may determine. Distributions shall be made to (and profits and losses of the Company shall be allocated among) the Member.

16. **Return of Capital**. The Member has the right to receive any distributions which include a return of all or any part of such Member's capital contribution, provided that upon the dissolution and winding up of the Company, the assets of the Company shall be distributed as provided in Section 18-804 of the Act.

17. **Dissolution**. The Company shall be dissolved and its affairs wound up upon the occurrence of an event causing a dissolution of the Company under Section 18-801 of the Act, except the Company shall not be dissolved upon the occurrence of an event that terminates the continued membership of a Member if (i) at the time of the occurrence of such event there are at least two Members of the Company, or (ii) within ninety (90) days after the occurrence of such

event, all remaining Members agree in writing to continue the business of the Company and to the appointment, effective as of the date of such event, of one or more additional Members. In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority set forth in Section 18-804 of the Act.

18. **Amendments**. This Agreement may be amended only upon the written consent of the Member.

19. **Other Business**. The Member may engage in or possess an interest in other business ventures of every kind and description, independently or with others. The Company shall not have any rights in or to such independent ventures or the income or profits therefrom by virtue of this Agreement.

20. **Limited Liability**. The Member shall not have any liability for the debts, obligations or liabilities of the Company except to the extent provided by the Act.

21. **Exculpation; Indemnification**. Neither the Member, the Officers nor any of their respective affiliates or agents (collectively, "Covered Persons") shall be liable to the Company or any other person or entity who has an interest in the Company for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement. To the fullest extent permitted by applicable law, each Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement; provided, however, that any indemnity under this Section 21 shall be provided out of and to the extent of Company assets only, and neither the Member nor the Officer, as applicable, nor any other Covered Person, shall have personal liability on account thereof.

22. **Banking Matters**. The Member and each Officer and any agent or employee of the Company, or other person designated by such Member or Officer is hereby authorized and empowered (A) to (i) establish one or more domestic or international accounts (including but not limited to, depository, checking, disbursement, custodian, or investment accounts, and other accounts as deemed necessary or expeditious for business purposes of the Company) ("Accounts"), in the name of the Company with any bank, trust company, savings and loan institution, brokerage firm or other financial institution which said Member or Officer shall from time to time designate as a depository of funds, securities or other property of the Company, for any purpose and on terms and conditions deemed appropriate by such person on behalf of the Company; and (ii) close Accounts of the Company now or hereafter established; and (B) to assign, limit or revoke any and all authority of any agent or employee of the Company, or other person designated by such Member or Officer to (i) sign checks, drafts and orders for the payment of money drawn on the Company's Accounts, and all notes of the Company and all

acceptances and endorsements of the Company; (ii) execute or initiate electronic fund transfers; (iii) execute or initiate foreign currency exchange transactions; (iv) execute or initiate the investment of monies; and (v) initiate requests for information for any Account of the Company.

23. **Authorized Person**. Delaware Business Incorporators, Inc. is hereby designated as an "authorized person" within the meaning of the Act, and has executed, delivered and filed the Certificate with the Secretary of State of the State of Delaware. Upon the filing of the Certificate with the Secretary of State of Delaware, Delaware Business Incorporators, Inc.'s powers as an "authorized person" ceased.

24. **Amendment**. This Agreement may only be amended by a writing duly signed by the Member.

25. **Governing Law**. This Agreement shall be governed by, and construed under, the laws of the State of Delaware, without regard to conflict of law rules.

IN WITNESS WHEREOF, the undersigned has duly executed this Agreement as of the date first written above.

MIAMI INTERNATIONAL HOLDINGS, INC.

By: _____

THOMAS P. GALLAGHER
Chairman and Chief Executive Officer
7 Roszel Road, 5th Floor
Princeton, NJ 08540

AMENDED AND RESTATED
LIMITED LIABILITY COMPANY AGREEMENT
OF
MIAX PEARL, LLC
(a Delaware limited liability company)

Miami International Holdings, Inc., a Delaware corporation, the sole member (the "LLC Member") of **MIAX PEARL, LLC**, a Delaware limited liability company (the "Company"), pursuant to and in accordance with the Delaware Limited Liability Company Act, 6 Del.C. § 18-101, et seq. (the "LLC Act"), hereby declares the following to be the Amended and Restated Limited Liability Company Agreement (the "LLC Agreement") of the Company which amends and restates in its entirety the Limited Liability Company Agreement dated March 7, 2016 of the Company (the "Operating Agreement"). Capitalized terms not otherwise defined herein shall have the meanings set forth on Schedule A to this LLC Agreement.

Section 1. **Formation of the Company**. The Company has been formed as a limited liability company under the LLC Act by the filing of a Certificate of Formation with the Office of the Secretary of State of the State of Delaware. The LLC Member agrees to be bound by and comply with the provisions thereof and hereof.

Section 2. **Name.** The name of the Company is "MIAX PEARL, LLC".

Section 3. **Principal Place of Business.** The location of the principal place of business of the Company shall be 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540, or such other place as determined by the Board of Directors from time to time.

Section 4. **Registered Office; Registered Agent.** The registered office of the Company required by the LLC Act to be maintained in the State of Delaware shall be 3422 Old Capitol Trail, Suite 700, Wilmington, DE 19808-6192, County of New Castle or such other office as the Board of Directors may designate from time to time. The registered agent for the Company shall be Delaware Business Incorporators, Inc., or such other registered agent as the Board of Directors may designate from time to time.

Section 5. **Term.** The Company shall continue until the Company is terminated in accordance with the provisions of this LLC Agreement.

Section 6. **LLC Member.** The mailing address of the LLC Member is set forth on Schedule B attached hereto. The LLC Member was admitted to the Company as an LLC Member of the Company upon its execution of a counterpart signature page to the Operating Agreement at which time it acquired 100% of the limited liability company interests of the Company.

Section 7. **Purpose of the Company.** The purpose of the Company shall be to conduct the operations of an "exchange" within the meaning of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and to conduct any lawful business or activity

whatsoever, as permitted by applicable law and as determined from time to time by the board of directors of the Company (the "Board of Directors").

Section 8. Powers. The Company, and the Board of Directors and the Officers of the Company on behalf of the Company, (i) shall have and exercise all powers necessary, convenient or incidental to accomplish its purposes as set forth in Section 7 and (ii) shall have and exercise all of the powers and rights conferred upon limited liability companies formed pursuant to the LLC Act.

Section 9. Management.

(a) Board of Directors. The business and affairs of the Company shall be managed by or under the direction of a Board of Directors. Each Director is hereby designated as a "manager" within the meaning of the LLC Act. All Directors shall be elected by the LLC Member in the manner described in the By-Laws (as defined below). Each Director shall execute and deliver an instrument accepting such appointment and agreeing to be bound by all the terms and conditions of this LLC Agreement and the By-Laws. A Director need not be an LLC Member or an Exchange Member. The Directors as of the date of this LLC Agreement are set forth on Schedule C attached hereto.

(b) Powers. The Board of Directors shall have the power to do any and all acts necessary, convenient or incidental to or for the furtherance of the purposes described herein, including all powers, statutory or otherwise. The Board of Directors has the authority to bind the Company.

(c) By-Laws. The Company, the LLC Member and the Board of Directors hereby adopt the By-Laws of the Company in the form attached hereto as Exhibit A, as the same may be amended from time to time in accordance with the terms therein and in this LLC Agreement (the "By-Laws"). Each member of the Board of Directors, each Officer and the LLC Member shall be subject to the express provisions of this LLC Agreement and of the By-Laws. In case of any conflict between the provisions of this LLC Agreement and any provisions of the By-Laws, the provisions of this LLC Agreement shall control.

(d) Directors as Agents. To the extent of their powers set forth in this LLC Agreement, the Directors are agents of the Company for the purpose of the Company's business, and the actions of the Directors taken in accordance with such powers set forth in this LLC Agreement shall bind the Company. Notwithstanding the last sentence of Section 18-402 of the LLC Act, except as provided in this LLC Agreement, the By-Laws or in a resolution of the Directors, a Director may not bind the Company.

Section 10. Officers.

(a) Officers of the Company. Except as provided herein, the Board may, from time to time as it deems advisable, select natural persons who are employees or agents of the Company and designate them as officers of the Company (the "Officers") and assign titles (including, without limitation, Chief Executive Officer, Vice President, Chief Financial Officer,

Chief Regulatory Officer, Secretary and Treasurer) to any such person. The Board may appoint such other Officers and agents as it shall deem necessary or advisable who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board. The salaries of all Officers and agents of the Company shall be fixed by or in the manner prescribed by the By-Laws. The Officers of the Company shall hold office until their successors are chosen and qualified. Any Officer may be removed at any time, with or without cause, by the Board. Any vacancy occurring in any office of the Company shall be filled by the Board.

(b) Officers as Agents. The Officers, to the extent of their powers set forth in this LLC Agreement, the By-Laws or otherwise vested in them by action of the Board not inconsistent with this LLC Agreement, are agents of the Company for the purpose of the Company's business, and the actions of the Officers taken in accordance with such powers shall bind the Company.

(c) Duties of Board and Officers. Except to the extent otherwise modified herein, each Director and Officer shall have a fiduciary duty of loyalty and care similar to that of directors and officers of business corporations organized under the General Corporation Law of the State of Delaware.

Section 11. Advisory Board. The LLC Member may appoint any person or persons to act in an advisory capacity to the Company. Such a group shall be known as the Advisory Board.

Section 12. Limited Liability. Except as otherwise expressly provided by the LLC Act, the debts, obligations and liabilities of the Company, whether arising in contract, tort or otherwise (including, without limitation, those arising as member, owner or shareholder of another company, partnership or entity), shall be the debts, obligations and liabilities solely of the Company, and neither the LLC Member nor any Director or Officer shall be obligated personally for any such debt, obligation or liability of the Company solely by reason of being an LLC Member or Director or Officer of the Company.

Section 13. Capital Contributions. The LLC Member has contributed to the Company the amounts set forth in the books and records of the Company.

Section 14. Additional Contributions. The LLC Member is not required to make any additional capital contribution to the Company. However, the LLC Member may make additional capital contributions to the Company at any time upon the consent of such LLC Member. To the extent that the LLC Member makes an additional capital contribution to the Company, the LLC Member shall revise the books and records of the Company. The provisions of this LLC Agreement, including this Section 14, are intended to benefit the LLC Member and, to the fullest extent permitted by law, shall not be construed as conferring any benefit upon any creditor of the Company (and no such creditor of the Company shall be a third-party beneficiary of this LLC Agreement), and the LLC Member shall not have any duty or obligation to any creditor of the Company to make any contribution to the Company or to issue any call for capital pursuant to this LLC Agreement.

Section 15. **Allocation of Profits and Losses.** The Company's profits and losses shall be allocated to the LLC Member.

Section 16. **Distributions.** Distributions shall be made to the LLC Member at the times and in the aggregate amounts determined by the Board. Notwithstanding any provision to the contrary contained in this LLC Agreement, (i) the Company shall not be required to make a distribution to the LLC Member on account of its interest in the Company if such distribution would violate the LLC Act or any other applicable law, and (ii) the Company shall not make a distribution to the LLC Member using Regulatory Funds.

Section 17. **Books and Records.**

(a) The Board shall keep or cause to be kept complete and accurate books of account and records with respect to the Company's business. The books and records of the Company shall at all times be maintained by the Board at a location within the United States. The LLC Member and its duly authorized representatives shall have the right to examine the Company books, records and documents during normal business hours. The Company, and the Board on behalf of the Company, shall not have the right to keep confidential from the LLC Member any information that the Board would otherwise be permitted to keep confidential from the LLC Member pursuant to Section 18-305(c) of the LLC Act. The Company's books of account shall be kept using the method of accounting determined by the LLC Member. The Company's independent auditor shall be an independent public accounting firm selected by the Board.

(b) All books and records of the Company reflecting confidential information pertaining to the self-regulatory function of the Company (including but not limited to disciplinary matters, trading data, trading practices, and audit information) shall be retained in confidence by the Company and its personnel and will not be used by the Company for any non-regulatory purposes and shall not be made available to any person (including, without limitation, any Exchange Member) other than to personnel of the Commission, and those personnel of the Company, members of committees of the Company, members of the Board, hearing officers and other agents of the Company to the extent necessary or appropriate to properly discharge the self-regulatory responsibilities of the Company.

Section 18. **Reports.** The Board shall, after the end of each fiscal year, use reasonable efforts to cause the Company's independent accountants to prepare and transmit to the LLC Member as promptly as possible any such tax information as may be reasonably necessary to enable the LLC Member to prepare its federal, state and local income tax returns relating to such fiscal year.

Section 19. **Other Business.** Unless otherwise restricted by law, the LLC Member, and any Officer, Director, employee or agent of the Company and any Affiliate of the LLC Member may engage in or possess an interest in other business ventures (unconnected with the Company) of every kind and description, independently or with others. The Company shall not

have any rights in or to such independent ventures or the income or profits therefrom by virtue of this LLC Agreement.

Section 20. Exculpation and Indemnification.

(a) Neither the LLC Member nor any Officer, Director, employee or agent of the Company nor any employee, representative, agent or affiliate of the LLC Member (collectively, the "Covered Persons") shall be liable to the Company or any other Person who is bound by this LLC Agreement for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this LLC Agreement, except that a Covered Person shall be liable for any such loss, damage or claim incurred by reason of such Covered Person's willful misconduct.

(b) To the fullest extent permitted by applicable law, a Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this LLC Agreement, except that no Covered Person shall be entitled to be indemnified in respect of any loss, damage or claim incurred by such Covered Person by reason of such Covered Person's willful misconduct with respect to such acts or omissions; provided, however, that any indemnity under this Section 20 by the Company shall be provided out of and to the extent of Company assets only, and the LLC Member shall not have personal liability on account thereof.

(c) To the fullest extent permitted by applicable law, expenses (including reasonable legal fees) incurred by a Covered Person defending any claim, demand, action, suit or proceeding shall, from time to time, be advanced by the Company prior to the final disposition of such claim, demand, action, suit or proceeding upon receipt by the Company of an undertaking by or on behalf of the Covered Person to repay such amount if it shall be determined that the Covered Person is not entitled to be indemnified as authorized in this Section 20.

(d) A Covered Person shall be fully protected in relying in good faith upon the records of the Company and upon such information, opinions, reports or statements presented to the Company by any Person as to matters the Covered Person reasonably believes are within such other Person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Company, including information, opinions, reports or statements as to the value and amount of the assets, liabilities or any other facts pertinent to the existence and amount of assets from which distributions to the LLC Member might properly be paid.

(e) To the extent that, at law or in equity, a Covered Person has duties (including fiduciary duties) and liabilities relating thereto to the Company or to any other Covered Person, a Covered Person acting under this LLC Agreement shall not be liable to the Company or to any other Covered Person who is bound by this LLC Agreement for its good faith

reliance on the provisions of this LLC Agreement or any approval or authorization granted by the Company or any other Covered Person.

(f) The foregoing provisions of this Section 20 shall survive any termination of this LLC Agreement and are in addition to any indemnification of Covered Persons provided by any agreement between the Company and a Covered Person, the By-Laws, by statute, or otherwise.

Section 21. Assignments. The LLC Member may assign, in whole or in part, its limited liability company interest in the Company (the "LLC Interest"); provided, however, such assignment 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 Exchange Act. The assignment of the LLC Interest shall entitle the assignee to exercise the rights of the LLC Member of the Company under this LLC Agreement and to enjoy all of the benefits of the LLC Interest.

Section 22. Dissolution.

(a) The Company shall be dissolved and its affairs shall be wound up upon the first to occur of the following: (i) the consent of the LLC Member and a majority of the whole Board, (ii) the termination of the legal existence of the LLC Member or the occurrence of any other event that terminates the continued membership of the LLC Member in the Company unless the Company is continued without dissolution in a manner permitted by this LLC Agreement or the LLC Act or (iii) the entry of a decree of judicial dissolution under Section 18-802 of the LLC Act.

(b) Notwithstanding any other provision of this LLC Agreement, the Bankruptcy of the LLC Member shall not cause the LLC Member to cease to be an LLC Member of the Company and upon the occurrence of such an event, the Company shall continue without dissolution.

(c) In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority, set forth in Section 18-804 of the LLC Act.

(d) The Company shall terminate when (i) all of the assets of the Company, after payment of or due provision for all debts, liabilities and obligations of the Company, shall have been distributed to the LLC Member in the manner provided for in this LLC Agreement and (ii) the Certificate of Formation shall have been canceled in the manner required by the LLC Act.

Section 23. Benefits of LLC Agreement - No Third-Party Rights. None of the provisions of this LLC Agreement shall be for the benefit of or enforceable by any creditor of the Company or by any creditor of the LLC Member. Nothing in this LLC Agreement shall be deemed to create any right in any Person (other than Covered Persons and to the extent provided

in Article II of the By-Laws, Exchange Members) not a party hereto, and this LLC Agreement shall not be construed in any respect to be a contract in whole or in part for the benefit of any third Person (other than the Covered Persons and to the extent provided in Article II of the By-Laws, Exchange Members).

Section 24. Severability of Provisions. Each provision of this LLC Agreement shall be considered severable and if for any reason any provision or provisions herein are determined to be invalid, unenforceable or illegal under any existing or future law, such invalidity, unenforceability or illegality shall not impair the operation of or affect those portions of this LLC Agreement which are valid, enforceable and legal.

Section 25. Entire LLC Agreement. This LLC Agreement constitutes the entire agreement of the parties with respect to the subject matter hereof.

Section 26. Binding Agreement. Notwithstanding any other provision of this LLC Agreement, the LLC Member agrees that this LLC Agreement constitutes a legal, valid and binding agreement of the LLC Member and is enforceable against the LLC Member, in accordance with its terms.

Section 27. Governing Law. This LLC Agreement shall be governed by and construed under the laws of the State of Delaware (without regard to conflict of laws principles), all rights and remedies being governed by said laws.

Section 28. Amendments.

(a) This LLC Agreement may be modified, altered, supplemented or amended by a resolution adopted by the Board and a written agreement executed and delivered by the LLC Member.

(b) Before any amendment to, or repeal of, any provision of this LLC Agreement shall be effective, those changes shall be submitted to the Board of Directors of the Company and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this LLC Agreement shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

Section 29. Notices. Any notices required to be delivered hereunder shall be in writing and personally delivered, mailed or sent by telecopy, electronic mail or other similar form of rapid transmission, and shall be deemed to have been duly given upon receipt (i) in the case of the Company, to the Company at its address in Section 3, (ii) in the case of the LLC Member, to the LLC Member at its address as listed on Schedule B attached hereto and (iii) in the case of either of the foregoing, at such other address as may be designated by written notice to the other party.

IN WITNESS WHEREOF, the undersigned, intending to be legally bound hereby, has duly executed this Amended and Restated Limited Liability Company Agreement as of the 5th day of December, 2016.

MEMBER:

MIAMI INTERNATIONAL HOLDINGS, INC.

By: _____
Thomas P. Gallagher
Chairman

SCHEDULE A

Definitions

A. Definitions

When used in this LLC Agreement, the following terms not otherwise defined herein have the following meanings:

An "affiliate" of, or person "affiliated" with a specific person, is a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified.

"Bankruptcy" means, with respect to any Person, if (A) such Person (i) makes an assignment for the benefit of creditors, (ii) files a voluntary petition in bankruptcy, (iii) is adjudged a bankrupt or insolvent, or has entered against it an order for relief, in any bankruptcy or insolvency proceedings, (iv) files a petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, liquidation or similar relief under any statute, law or regulation, (v) files an answer or other pleading admitting or failing to contest the material allegations of a petition filed against it in any proceeding of this nature, or (vi) seeks, consents to or acquiesces in the appointment of a trustee, receiver or liquidator of the Person or of all or any substantial part of its properties; or (B) (i) 120 days after the commencement of any proceeding against the Person seeking reorganization, arrangement, composition, readjustment, liquidation or similar relief under any statute, law or regulation, the proceeding has not been dismissed, or (ii) within 90 days after the appointment without such Person's consent or acquiescence of a trustee, receiver or liquidator of such Person or of all or any substantial part of its properties, the appointment is not vacated or stayed, or within 90 days after the expiration of any such stay, the appointment is not vacated. The foregoing definition of "Bankruptcy" is intended to replace and shall supersede and replace the definition of "Bankruptcy" set forth in Sections 18-101(1) and 18-304 of the LLC Act.

"Board" or "Board of Directors" means the Board of Directors of the Company.

"By-Laws" has the meaning set forth in Section 9(c).

"Certificate of Formation" means the Certificate of Formation of the Company filed with the Secretary of State of the State of Delaware on February 11, 2016, as amended or amended and restated from time to time.

"Commission" means the Securities and Exchange Commission.

"Company" means MIAX PEARL, LLC, a Delaware limited liability company.

"Covered Persons" has the meaning set forth in Section 20.

"Directors" means the Persons elected or appointed to the Board of Directors from time to time in accordance with this LLC Agreement and the By-Laws, in their capacity as managers of the Company.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Exchange Member" means any registered broker or dealer that has been admitted to membership in the national securities exchange operated by the Company. An Exchange Member is not a member of the Company by reason of being an Exchange Member.

"LLC Act" has the meaning set forth in the preamble to this LLC Agreement.

"LLC Agreement" means this Limited Liability Company Agreement of the Company, together with the schedules attached hereto, as amended, restated, supplemented or otherwise modified from time to time.

"LLC Interest" has the meaning set forth in Section 21.

"LLC Member" means Miami International Holdings, Inc., as the sole member of the Company.

"Officer" means an officer of the Company described in Section 10.

"Operating Agreement" has the meaning set forth in the preamble to this LLC Agreement.

"Person" means any individual, corporation, partnership, joint venture, limited liability company, limited liability partnership, association, joint stock company, trust, unincorporated organization or other organization, whether or not a legal entity, and any governmental authority.

"Regulatory Funds" means fees, fines, or penalties derived from the regulatory operations of the Company. "Regulatory Funds" shall not be construed to include revenues derived from listing fees, market data revenues, transaction revenues, or any other aspect of the commercial operations of the Company, even if a portion of such revenues are used to pay costs associated with the regulatory operations of the Company.

B. Rules of Construction

Definitions in this LLC Agreement apply equally to both the singular and plural forms of the defined terms. The words "include" and "including" shall be deemed to be followed by the phrase "without limitation." The terms "herein," "hereof" and "hereunder" and other words of similar import refer to this LLC Agreement as a whole and not to any particular Section, paragraph or subdivision. The Section titles appear as a matter of convenience only and shall not affect the interpretation of this LLC Agreement. All Section, paragraph, clause, Exhibit or Schedule references not attributed to a particular document shall be references to such parts of this LLC Agreement.

SCHEDULE B

LLC Member

Name	Mailing Address	Limited Liability Company Interest
Miami International Holdings, Inc.	7 Roszel Road, 5th Floor Princeton, NJ 08540	100%

SCHEDULE C

Directors as of December 5, 2016

	Name	Classification
1.	Thomas P. Gallagher	Industry
2.	Robert D. Prunetti	Non-Industry/Independent
3.	John Beckelman	Industry
4.	Lindsay L. Burbage	Non-Industry/Independent
5.	John E. McCormac	Non-Industry/Independent
6.	Leslie Florio	Non-Industry/Independent
7.	Lawrence E. Jaffe	Non-Industry/Independent
8.	Cynthia Schwarzkopf	Non-Industry/Independent

EXHIBIT A

BY-LAWS OF MIAX PEARL, LLC

[Separate document]

BY-LAWS

OF

MIAX PEARL, LLC

(a Delaware limited liability company)

These By-Laws have been established as the By-Laws of **MIAX PEARL, LLC**, a Delaware limited liability company (the "Company"), pursuant to the Amended and Restated Limited Liability Company Agreement of the Company, dated as of December 5, 2016, (as amended from time to time, the "LLC Agreement"), and, together with the LLC Agreement, constitute the limited liability company agreement of the Company within the meaning of the LLC Act (as defined in the LLC Agreement). In the event of any inconsistency between the LLC Agreement and these By-Laws, the provision of the LLC Agreement shall control.

ARTICLE I
Definitions

When used in these By-Laws, unless the context otherwise requires, the terms set forth below shall have the following meanings:

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

(b) An "affiliate" of, or person "affiliated" with a specific person, is a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified.

(c) "Board" or "Board of Directors" means the Board of Directors of the Company.

(d) "broker" shall have the same meaning as in Section 3(a)(4) of the Act.

(e) "Certificate of Formation" means the Certificate of Formation of the Company filed with the office of the Secretary of State of the State of Delaware on February 11, 2016, as amended or amended and restated from time to time.

(f) "Commission" means the Securities and Exchange Commission.

(g) "Company" means MIAX PEARL, LLC, a Delaware limited liability company.

(h) "day" means calendar day.

(i) "dealer" shall have the same meaning as in Section 3(a)(5) of the Act.

(j) "Director" means the persons elected or appointed to the Board of Directors from time to time in accordance with the LLC Agreement and these By-Laws in their capacity as managers of the Company.

(k) "Effective Date" means the date of effectiveness of these By-Laws.

(l) "Exchange" means the national securities exchange operated by the Company.

(m) "Exchange Contract" means a contract that is then listed for trading by the Exchange or that is contemplated by the then current business plan of the Company to be listed for trading by the Exchange within ninety (90) days following such date.

(n) "Exchange Member" means any registered broker or dealer that has been admitted to membership in the national securities exchange operated by the Company. An Exchange Member is not a member of the Company by reason of being an Exchange Member. An Exchange Member will have the status of a "member" of the Exchange as that term is defined in Section 3(a)(3) of the Act.

(o) "Executive Representative" means the person identified to the Company by an Exchange Member as the individual authorized to represent, vote, and act on behalf of the Exchange Member. An Exchange Member may change its Executive Representative or appoint a substitute for its Executive Representative upon giving notice thereof to the Secretary of the Company via electronic process or such other process as the Company may prescribe. An Executive Representative of an Exchange Member or a substitute shall be a member of senior management of the Exchange Member.

(p) "Independent Director" means a Director who has no material relationship with the Company or any affiliate of the Company, or any Exchange Member or any affiliate of any such Exchange Member; *provided*, however, that an individual who otherwise qualifies as an Independent Director shall not be disqualified from serving in such capacity solely because such Director is a Director of the Company or its LLC Member.

(q) "Independent member" means a member of any committee who has no material relationship with the Company or any affiliate of the Company, or any Exchange Member or any affiliate of any such Exchange Member, other than as a committee member. The term Independent member may but is not required to refer to an Independent Director who serves on a committee.

(r) "Industry Director" means a Director who (i) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (ii) is an officer, director (excluding an outside director), or employee of an entity that owns more than 10% of the equity of a broker or dealer, and the broker or dealer accounts for more than 5% of the gross revenues received by the consolidated entity; (iii) owns more than 5% of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed 10% of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (iv) provides professional services to brokers or dealers, and such services constitute 20% or more of the professional revenues received by the Director or 20% or more of the gross revenues received by the Director's firm or partnership; (v) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50% or more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20% or more of the professional revenues received by the Director or member or 20% or more of the gross revenues received by the Director's or member's firm or partnership; or (vi) has a consulting or employment relationship with or provides professional services to the Company or any affiliate thereof or has had any such relationship or provided any such services at any time within the prior three years.

(s) "Industry member" means a member of any committee or hearing panel who (i) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (ii) is an officer, director (excluding an outside director), or employee of an entity that owns more than 10% of the equity of a broker or dealer, and the broker or dealer accounts for more than 5% of the gross revenues received by the consolidated entity; (iii) owns more than 5% of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed 10% of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (iv) provides professional services to brokers or dealers, and such services constitute 20% or more of the professional revenues received by the Director or 20% or more of the gross revenues received by the Director's firm or partnership; (v) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50% or more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20% or more of the professional revenues received by the Director or member or 20% or more of the gross revenues received by the Director's or member's firm or partnership; or (vi) has a consulting or employment relationship with or provides professional services to the Company or any affiliate thereof or has had any such relationship or provided any such services at any time within the prior three years.

(t) "List of Candidates" means the list of nominees for Member Representative Director positions as nominated by the Member Nominating Committee and amended by petitions filed by Exchange Members. The List of Candidates is submitted to Exchange Members for the final selection of nominees to be elected by the LLC Member to serve as Member Representative Directors.

(u) "LLC Act" means the Delaware Limited Liability Company Act, 6 §18-101, et seq.

(v) "LLC Member" means any person who maintains a direct ownership interest in the Company. The sole LLC Member of the Company shall be Miami International Holdings, Inc.

(w) "Member Nominating Committee" means the Member Nominating Committee elected pursuant to these By-Laws.

(x) "Member Representative Director" means a Director who has been appointed as such to the initial Board of Directors pursuant to Article II, Section 2.5 of these By-Laws, or elected by the LLC Member after having been nominated by the Member Nominating Committee or by an Exchange Member pursuant to these By-Laws and confirmed as the nominee of Exchange Members after majority vote of Exchange Members, if applicable. A Member Representative Director may, but is not required to be an officer, director, employee, or agent of an Exchange Member.

(y) "Member Representative member" means a member of any committee or hearing panel appointed by the Board who has been elected or appointed after having been nominated by the Member Nominating Committee pursuant to these By-Laws and who is an officer, director, employee, or agent of an Exchange Member.

(z) "Nominating Committee" means the Nominating Committee elected pursuant to these By-Laws.

(aa) "Non-Industry Director" means a Director who is (i) an Independent Director; or (ii) any other individual who would not be an Industry Director.

(bb) "Non-Industry member" means a member of any committee who is (i) an Independent member; or (ii) any other individual who would not be an Industry member.

(cc) "person" shall mean a natural person, partnership, corporation, limited liability company, entity, government, or political subdivision, agency or instrumentality of a government.

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

(ee) "Record Date" means a date at least thirty-five (35) days before the date announced as the date for the annual meeting of the LLC Member and set as the last date on which Exchange Members may petition to add to the List of Candidates and used to determine whether Exchange Members are entitled to vote on the final List of Candidates.

(ff) "registered broker or dealer" means any registered broker or dealer, as defined in Section 3(a)(48) of the Act, that is registered with the Commission under the Act.

(gg) "Regulatory Funds" means fees, fines, or penalties derived from the regulatory operations of the Company. "Regulatory Funds" shall not be construed to include revenues derived from listing fees, market data revenues, transaction revenues, or any other aspect of the commercial operations of the Company, even if a portion of such revenues are used to pay costs associated with the regulatory operations of the Company.

(hh) "Rules" or "Exchange Rules" shall have the same meaning as set forth in Section 3(a)(27) of the Act.

(ii) "statutory disqualification" shall have the same meaning as in Section 3(a)(39) of the Act.

ARTICLE II
Board of Directors

Section 2.1 Powers

(a) The business and affairs of the Company shall be managed by its Board, except to the extent that the authority, powers and duties of such management shall be delegated to a committee or committees of the Board pursuant to these By-Laws or the Rules. The Board of Directors shall have the power to do any and all acts necessary, convenient or incidental to or for the furtherance of the purposes described herein, including all powers, statutory or otherwise. To the fullest extent permitted by applicable law and these By-Laws, the Board may delegate any of its powers to a committee appointed pursuant to Article IV or to any officer, employee or agent of the Company.

(b) The Board shall have the power to adopt, amend or repeal the Rules in accordance with Article IX, Section 9.1.

(c) The Board may adopt such rules, regulations, and requirements for the conduct of the business and management of the Company, not inconsistent with law, the Certificate of Formation, the LLC Agreement or these By-Laws, as the Board may deem proper. A Director shall, in the performance of such Director's duties, be fully protected, to the fullest extent permitted by law, in relying in good faith upon the books of account or reports made to the Company by any of its officers, by an independent certified public accountant, by an appraiser selected with reasonable care by the Board or any committee of the Board or by any agent of the Company, or in relying in good faith upon other records of the Company.

(d) In connection with managing the business and affairs of the Company, the Board shall consider applicable requirements for registration as a national securities exchange under Section 6(b) of the Act, including, without limitation, the requirements that (i) the Rules shall be designed to protect investors and the public interest and (ii) the Company shall be so organized and have the capacity to carry out the purposes of the Act and to enforce compliance by its "members," as that term is defined in Section 3 of the Act (such statutory members being referred to in these By-Laws as "Exchange Members") and persons associated with Exchange Members, with the provisions of the Act, the rules and regulations under the Act, and the Rules of the Exchange. In furtherance of the foregoing, the Board shall, among other things, approve the Exchange's budget which shall be adequate for the operation of the Exchange and for the Exchange to carry out its responsibilities under the Act. In connection therewith, the Board shall approve the Exchange's regulatory budget which shall be adequate for the regulation of the Exchange.

(e) In light of the unique nature of the Company and its operations and in light of the Company's status as a self-regulatory organization, the Board shall, to the fullest extent permitted by applicable law, take into account all factors that the Board deems relevant, including, without limitation, to the extent deemed relevant: (i) the potential impact thereof on the integrity, continuity and stability of the national securities exchange operated by the Company and the other operations of the Company, on the ability to prevent fraudulent and manipulative acts and practices and on investors and the public, and (ii) whether such would promote just and equitable principles of trade, foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to and facilitating transactions in securities or assist in the removal of impediments to or perfection of the mechanisms for a free and open market and a national market system.

Section 2.2 Composition of the Board

(a) The number of Directors shall be not less than ten (10) including the Chief Executive Officer of the Company. The number of Directors may be fixed from time to time by the LLC Member at any time in its sole and absolute discretion, upon notice to all Directors subject to the minimum number provided for in this Section 2.2(a). No decrease in the number of Directors shall have the effect of shortening the term of any incumbent Director.

(b) At all times the Board of Directors shall consist of one (1) Director who is the Chief Executive Officer of the Company and sufficient numbers of Non-Industry (including Independent), Industry and Member Representative Directors to meet the following composition requirements:

(i) The number of Non-Industry Directors, including at least one Independent Director, shall equal or exceed the sum of the number of Industry Directors and Member Representative Directors elected pursuant to Article II, Section 2.4 or Section 2.5; and

(ii) The number of Member Representative Directors shall be at least twenty (20) percent of the Board.

(c) The Secretary shall collect from each nominee for Director such information as is reasonably necessary to serve as the basis for a determination of the nominee's classification as a Member Representative, Non-Industry or Independent Director, if applicable, and the Secretary shall certify to the Nominating Committee or Member Nominating Committee each nominee's classification, if applicable. Directors shall update the information submitted under this subsection at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information.

(d) A Director may not be subject to a statutory disqualification.

(e) The current Board of Directors consists of the Directors elected by the LLC Member and set forth on Schedule C to the LLC Agreement (the "Current Directors"). In addition to the Current Directors, interim Member Representative Directors shall be elected to the Board of Directors pursuant to the provisions set forth in Article II, Section 2.5 below (the "Interim Member Representative Directors"). The Current Directors and the Interim Member Representative Directors (together, the "Interim Directors") shall not be divided into classes as set forth in Section 2.3(b) and shall serve only until the first annual meeting of the LLC Member following the approval of the Company as a national securities exchange by the Commission, which meeting shall be held within ninety (90) days after the Exchange's application for registration as a national securities exchange is granted.

Section 2.3 Terms of Office

(a) The Board term of the Chief Executive Officer shall expire when such individual ceases to be Chief Executive Officer of the Company.

(b) Each of the Non-Industry and Industry Directors (including Member Representative Directors) shall be divided into three (3) classes, designated Class I, Class II and Class III, which shall be as nearly equal in number and classification as the total number of such Directors then serving on the Board permits. Directors other than the Chief Executive Officer shall serve staggered three-year terms, with the term of office of one class expiring each year. A Director may serve for any number of terms, consecutive or otherwise. In order to commence such staggered three-year terms, Directors in Class I shall hold office until the second annual election of the Board of Directors, Directors in Class II shall initially hold office until the third annual election of the Board of Directors, and Directors in Class III shall initially hold office until the fourth annual election of the Board of Directors. Commencing with the second annual election of the Board of Directors, the term of office for each class of Directors elected at such time shall be three years from the date of their election. Notwithstanding the foregoing, in the case of any new Director as contemplated by Article II, Section 2.2(a), such Director shall be added to a class, as determined by the Board at the time of such Director's initial election or appointment, and shall have an initial term expiring at the same time as the term of the class to which such Director has been added.

Section 2.4 Nomination and Election

(a) The Nominating Committee each year shall nominate Directors for each Director position standing for election at the annual meeting of the LLC Member that year. For positions requiring persons who qualify as Member Representative Directors, the Nominating Committee shall nominate only those persons whose names have been approved and submitted by the Member Nominating Committee, and approved by, if applicable, Exchange Members pursuant to the procedures set forth below in this Section 2.4.

(b) The Member Nominating Committee shall consult with the Nominating Committee, the Chairman and Chief Executive Officer, and shall solicit comments from Exchange Members for the purpose of approving and submitting names of candidates for election to the position of Member Representative Director. A Member Representative Director may, but is not required to be an officer, director, employee, or agent of an Exchange Member.

(c) Not later than sixty (60) days prior to the date announced as the date for the annual meeting of the LLC Member, the Member Nominating Committee shall report to the Nominating Committee and the Secretary the initial nominees for Member Representative Director positions on the Board that have been approved and submitted by the Member Nominating Committee. The Secretary shall promptly notify Exchange Members of those initial nominees. Exchange Members may identify other candidates ("Petition Candidates" for purposes of this Section 2.4) for the Member Representative Director positions by delivering to the Secretary, at least thirty-five (35) days before the date announced as the date for the annual meeting of the LLC Member (the "Record Date" for purposes of this Section 2.4), a written petition, which shall designate the candidate by name and office and shall be signed by Executive Representatives of ten percent (10%) or more of the Exchange Members. An Exchange Member may endorse as many candidates as there are Member Representative Director positions to be filled. No Exchange Member, together with its affiliates, may account for more than fifty percent (50%) of the signatures endorsing a particular candidate, and any signatures of such Exchange Member, together with its affiliates, in excess of the fifty percent (50%) limitation shall be disregarded.

(d) Each petition for a Petition Candidate must include a completed questionnaire used to gather information concerning Member Representative Director candidates and must be filed with the Company (the Company shall provide the form of questionnaire upon the request of any Exchange Member).

(e) If no valid petitions from Exchange Members are received by the Record Date, the initial nominees approved and submitted by the Member Nominating Committee shall be nominated as Member Representative Directors by the Nominating Committee. If one or more valid petitions from Exchange Members are received by the Record Date, the Secretary shall include such additional nominees, along with the initial nominees nominated by the Member Nominating Committee, on a list of nominees (the "List of Candidates"). Upon completion, the List of Candidates shall be sent by the Secretary to all Exchange Members that were Exchange Members on the Record Date, by any means, including electronic transmission, to confirm the nominees for the Member Representative Director positions. The List of Candidates shall be accompanied by a notice regarding the time and date of an election to be held at least twenty (20) days prior to the annual LLC Member meeting to confirm the Exchange Members' selections of nominees for Member Representative Directors.

(f) With respect to the election held to determine the final nomination of Member Representative Directors, each Exchange Member shall have the right to cast one (1) vote for each available Member Representative Director nomination; provided, however, that any such vote must be cast for a person on the List of Candidates and that no Exchange Member, together with its affiliates, may account for more than twenty percent (20%) of the votes cast for a candidate, and any votes cast by such Exchange Member, together with its affiliates, in excess of such twenty percent (20%) limitation shall be disregarded. The votes shall be cast by written ballot, electronic transmission or any other means as set forth in a notice to the Exchange Members sent by the Company prior to such election. Only votes received prior to 5:00 p.m. Eastern Time on the date of the election shall count for the nomination of a Member Representative Director. The persons on the List of Candidates who receive the most votes shall be selected as the nominees for the Member Representative Director positions to be elected by the LLC Member. Tie votes by the Exchange Members shall be decided by the Member Nominating Committee.

Section 2.5 Interim Directors

(a) The Interim Directors of the Board of Directors shall be appointed by the LLC Member and shall serve until the first annual meeting of the LLC Member following the approval of the Company as a national securities exchange by the Commission, which meeting shall be held within ninety (90) days after the Exchange's application for registration as a national securities exchange is granted. The Interim Member Representative Directors shall be appointed in accordance with the provisions of this Section 2.5.

(b) The Interim Member Representative Directors shall be appointed by the LLC Member by a consent in writing signed by the LLC Member pursuant to the provisions of Article III, Section 3.3 below and in accordance with this Section 2.5 (the "LLC Member Consent"). At least thirty (30) days prior to the date announced as the effective date for the LLC Member Consent (the "Consent Date"), the LLC Member shall report to the Secretary the initial nominees for Interim Member Representative Director positions on the Board that have been approved and submitted by the LLC Member (the "Initial Interim Member Representative Director Nominees"). At least twenty five (25) days prior to the Consent Date the Secretary shall notify the Exchange Member Applicants of those Initial Interim Member Representative Director Nominees (the "Interim Member Representative Director Nominee Notice"). Exchange Member Applicants may identify other candidates ("Interim Member Representative Director Petition Candidates" for purposes of this Section 2.5) for the Interim Member Representative Director positions by delivering to the Secretary, no later than fourteen (14) days after the date of the Interim Member Representative Director Nominee Notice (the "Interim Record Date" for purposes of this Section 2.5), a written petition, which shall designate the candidate by name and office and shall be signed by Executive Representatives of ten percent (10%) or more of the Exchange Member Applicants. An Exchange Member Applicant may endorse as many candidates as there are Interim Member Representative Director positions to be filled. No Exchange Member Applicant, together with its affiliates, may account for more than fifty percent (50%) of the signatures endorsing a particular candidate, and any signatures of such Exchange Member Applicant, together with its affiliates, in excess of the fifty percent (50%) limitation shall be disregarded. Exchange Member Applicants means persons and entities who have submitted the Initial Documents for membership in the Exchange, who would meet the qualifications for membership based on the information contained in the Initial Documents. Initial Documents means: either the Exchange Membership Pre-Application Survey or the Exchange Participant Connectivity Request Form.

(c) Each petition for an Interim Member Representative Director Petition Candidate must include a completed questionnaire used to gather information concerning Interim Member Representative Director candidates and must be filed with the Company (the Company shall provide the form of questionnaire upon the request of any Exchange Member Applicant).

(d) If no valid petitions from Exchange Member Applicants are received by the Interim Record Date, the Initial Interim Member Representative Director Nominees approved and submitted by the LLC Member pursuant to Section 2.5(b) shall be nominated as Interim Member Representative Directors. If one or more valid petitions from Exchange Member Applicants are received by the Interim Record Date, the Secretary shall include such additional nominees, along with the Initial Interim Member Representative Director Nominees, on a list of nominees (the "List of Interim Member Representative Director Candidates"). Upon completion, the List of Interim Member Representative Director Candidates shall be sent by the Secretary to all Exchange Member Applicants that were Exchange Member Applicants on the Interim Record Date by electronic transmission to confirm the nominees for the Interim Member Representative Director positions. The List of Interim Candidates shall be accompanied by a notice regarding the time and date of an election (the "Interim Election Notice") to be held electronically no sooner than five (5) days after the Interim Election Notice is delivered to confirm the Exchange Member Applicants' selections of nominees for Interim Member Representative Directors.

(e) With respect to the election held to determine the final nomination of Interim Member Representative Directors, each Exchange Member Applicant shall have the right to cast one (1) vote for each available Interim Member Representative Director nomination; provided, however, that any such vote must be cast for a person on the List of Interim Candidates and that no Exchange Member Applicant, together with its affiliates, may account for more than twenty percent (20%) of the votes cast for a candidate, and any votes cast by such Exchange Member Applicant, together with its affiliates, in excess of such twenty percent (20%) limitation shall be disregarded. The votes shall be cast by electronic transmission as set forth in a notice to the Exchange Member Applicants sent by the Company prior to such election. Only votes received prior to 5:00 p.m. Eastern Time on the date of the election shall count for the nomination of a Member Representative Director. The persons on the List of Interim Candidates who receive the most votes shall be selected as the nominees for the Interim Member Representative Director positions to be elected by the LLC Member pursuant to the Consent on the Consent Date.

(f) In the event of a tie vote for two or more Interim Member Representative Director positions, the tie will be broken by lot in a manner determined by the LLC Member.

Section 2.6 Chairman of the Board

The Board shall appoint one of the Directors to serve as the Chairman of the Board ("Chairman"). The Chairman shall preside at all meetings of the Board at which the Chairman is present; provided, however, that if the Chairman is the Chief Executive Officer he or she shall not participate in executive sessions of the Board. The Chairman shall exercise such other powers and perform such other duties as may be assigned to the Chairman from time to time by the Board. If the Chairman is the Chief Executive Officer, the Board of Directors shall designate a Lead Director from among the Board's Independent Directors to preside over executive sessions of the Board. The Board shall publicly disclose the identity of the Lead Director, if any, and the means by which interested parties may communicate with such Lead Director.

Section 2.7 Vice Chairman

Each year following the annual election of the Directors, the Board may select a Vice Chairman of the Board (the "Vice Chairman") to serve for a term of one year and until a successor is elected or appointed and qualified. The Vice Chairman shall (i) preside over the meetings of the Board in the event the Chairman of the Board is absent or unable to do so, and (ii) exercise such other powers and perform such other duties as are delegated to the Vice Chairman of the Board by the Board.

Section 2.8 Vacancies

(a) Whenever any Director position becomes vacant prior to the election of a successor at the end of such Director's term, whether because of death, disability, disqualification, removal, or resignation, the Nominating Committee shall nominate, and the LLC Member shall elect, a person satisfying the classification (Industry, Non-Industry, or Independent Director), if applicable, for the directorship as provided in Article II, Section 2.2(b) to fill such vacancy; *provided*, however, that if the remaining term of office of a Member Representative Director at the time of such Director's termination is not more than six months, during the period of vacancy the Board shall not be deemed to be in violation of Article II, Section 2.2(b) by virtue of such vacancy.

(b) If the LLC Member fills a vacancy resulting from a Member Representative Director position becoming vacant prior to the expiration of such Member Representative Director's term, or resulting from the creation of an additional Member Representative Director position required by an increase in the size of the Board, then the LLC Member shall follow the procedures set forth in this Section 2.8(b). In such an event, the Member Nominating Committee shall either (i) recommend an individual to the LLC Member to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the LLC Member from which the LLC Member shall elect the individual to fill such vacancy. The LLC Member shall elect, pursuant to this Section 2.8(b), only individuals recommended by the Member Nominating Committee.

Section 2.9 Removal and Resignation

(a) Except as hereinafter provided, any Director may be removed or expelled with or without cause by the LLC Member, and may be removed by the Board of Directors in the manner provided by Article II, Section 2.9(b) below; provided, however, that any Member Representative Director may only be removed for cause, which shall include, without limitation, such Director being subject to a statutory disqualification.

(b) A Director shall be removed immediately upon a determination by the Board, by a majority vote of the remaining Directors: (i) that the Director no longer satisfies the classification for which the Director was elected; and (ii) that the Director's continued service as such would violate the compositional requirements of the Board set forth in Article II, Section 2.2(b).

(c) Any Director may resign at any time either upon notice of resignation to the Chairman of the Board, the President or the Secretary. Any such resignation shall take effect at the time specified therein or, if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

Section 2.10 Place of Meetings; Mode

Any meeting of the Board may be held at such place, within or without the State of Delaware, as shall be designated in the notice of such meeting, but if no such designation is made, then the meeting will be held at the principal business office of the Company. Members of the Board or any committee of the Board may participate in a meeting of the Board or 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 the meeting.

Section 2.11 Regular Meetings

Regular meetings of the Board may be held, with or without notice, at such time or place as may from time to time be specified in a resolution adopted by the Board.

Section 2.12 Special Meetings

(a) Special meetings of the Board may be called on a minimum of two (2) days' notice to each Director by the Chairman, the Chief Executive Officer or the President, and shall be called by the Secretary upon the written request of three (3) Directors then in office.

(b) The person or persons calling a special meeting of the Board shall fix the time and place at which the meeting shall be held, and such time and place shall be specified in the notice of such meeting. Notice of any special meeting shall be given to each Director at his or her business address or such other address as he or she may have advised the Secretary to use for such purpose. If delivered, notice shall be deemed to be given when delivered to such address or to the Director to be notified. If mailed, such notice shall be deemed to be given five (5) business days after deposit in the United States mail, postage prepaid, of a letter addressed to the appropriate location. Notice may also be given by telephone, electronic transmission or other means not specified in this section, and in each such case shall be deemed to be given when actually received by the Director to be notified.

Section 2.13 Exchange Member Meetings

The Company shall not be required to hold meetings of the Exchange Members.

Section 2.14 Voting, Quorum and Action by the Board

Each Director shall be entitled to one (1) vote. At all meetings of the Board, the presence of a majority of the number of Directors then in office shall constitute a quorum for the transaction of business. If a quorum shall not be present at any meeting of the Board, the Directors present at such meeting may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. The act of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board except as may be otherwise specifically provided by statute, the Certificate of Formation, the LLC Agreement or these By-Laws.

Section 2.15 Presumption of Assent

A Director of the Company who is present at a duly convened meeting of the Board or of a committee of the Board at which action on any corporate matter is taken shall be conclusively

presumed to have assented to the action taken unless his or her dissent or election to abstain shall be entered in the minutes of the meeting or unless he or she shall file his or her written dissent or election to abstain to such action with the person acting as the secretary of the meeting before the adjournment of the meeting or shall forward such dissent or election to abstain by registered or certified mail to the Secretary of the Company immediately after the adjournment of the meeting. Such right to dissent or abstain shall not apply to a Director who voted in favor of such action.

Section 2.16 Action in Lieu of Meeting

Unless otherwise restricted by statute, the Certificate of Formation, the LLC Agreement or these By-Laws, any action required or permitted to be taken at any meeting of the Board or any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing(s) or electronic transmission(s) are filed with the minutes of proceedings of the Board or the committee.

Section 2.17 Waiver of Notice

(a) Whenever notice is required to be given by law, the Certificate of Formation, the LLC Agreement or these By-Laws, a waiver thereof by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board, or members of a committee, need be specified in any waiver of notice.

(b) Attendance of a person at a meeting 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 because the meeting is not lawfully called or convened.

Section 2.18 Compensation of Board and Committee Members

The Board may provide for reasonable compensation of the Chairman, the Directors and the members of committees. The Board may also provide for reimbursement of reasonable expenses incurred by such persons in connection with the business of the Company.

Section 2.19 Interpretation of By-Laws

The Board shall have the power to interpret these By-Laws and any interpretation made by it shall be final and conclusive.

Section 2.20 Conflicts of Interest; Contracts and Transactions Involving Directors

(a) A Director or a member of any committee may not participate in the consideration or decision of any matter relating to a particular Exchange Member, company, or individual if such Director or committee member has a material interest in, or a professional, business, or personal relationship with, that Exchange Member, company, or individual, or if such participation shall create an appearance of impropriety. In any such case, the Director or committee member shall recuse himself or herself or shall be disqualified. If a member of the Board or any committee is recused from consideration of a matter, any decision on the matter shall be by a vote of a majority of the remaining members of the Board or applicable committee.

(b) No contract or transaction between the Company and one or more of its Directors or officers, or between the Company and any other corporation, partnership, association, or other organization in which one or more of its Directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason if: (i) the material facts pertaining to such Director's or officer's relationship or interest and 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 vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum; or (ii) the material facts are disclosed or become known to the Board or committee after the contract or transaction is entered into, and the Board or committee in good faith ratifies the contract or transaction by the affirmative vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum.

ARTICLE III
The LLC Member

Section 3.1 Annual Meeting; Election of Directors and Other Matters

(a) The annual meeting of the LLC Member shall be held at such place and time as determined by the Board for the purpose of electing Directors and members of the Nominating Committee and Member Nominating Committee, and for conducting such other business as may properly come before the meeting. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to the LLC Member not less than ten (10) nor more than sixty (60) days before the date of the meeting.

(b) The Interim Directors, including the Interim Member Representative Directors, shall be appointed prior to the Company's commencement of operations as an Exchange. The first annual meeting of the LLC Member shall be held within ninety (90) days after the Company's application for registration as a national securities exchange is granted.

Section 3.2 Special Meetings

Special meetings of the LLC Member, for any purpose or purposes, may be called by the Chairman, the Board, the Chief Executive Officer or the President, and shall be called by the Secretary at the request in writing of the LLC Member. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given to the LLC Member not less than ten (10) nor more than sixty (60) days before the date of the meeting. Business transacted at any special meeting of the LLC Member shall be limited to the purpose(s) stated in the notice of the meeting.

Section 3.3 Action in Lieu of Meeting

Any action upon which a vote of the LLC Member 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 LLC Member.

Section 3.4 Assignment

The LLC Member may not transfer or assign in whole or in part its limited liability company interest in the Company to any entity, unless such transfer or assignment shall be filed with and approved by the Commission under Section 19 of the Exchange Act and the rules promulgated thereunder.

ARTICLE IV
Committees

Section 4.1 Designation of Committees

(a) **Committees of the Board**. The committees of the Board shall consist of a Compensation Committee, an Audit Committee, a Regulatory Oversight Committee, an Appeals Committee, and such other committees as may be provided in these By-Laws or the Rules or as may be from time to time established by the Board. Committees shall have such authority as is vested in them by these By-Laws or the Rules, or as is delegated to them by the Board. All committees are subject to the control and supervision of the Board.

(b) **Committees of the Exchange.** The Exchange also shall have such other committees as may be provided in these By-Laws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these By-Laws, the Rules or the resolution of the Board establishing any such other committee, the Chairman 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 thereof. Except as may be otherwise provided in these By-Laws or the Rules, the Chairman or his or her designee may, at any time, with or without cause, remove any member of any such Exchange committee.

Section 4.2 Board Committees - Appointment and Removal; Vacancies; Term

(a) Except as may be otherwise provided in these By-Laws, the Rules or the resolution of the Board establishing any committee, the Chairman, with the approval of the Board, shall appoint, consistent with these By-Laws, the members of all committees of the Board, and the Chairman may, at any time, with or without cause, remove any member of a committee so appointed, with the approval of the Board. Each committee shall be comprised of at least three (3) people and except as provided in these By-Laws may include persons who are not members of the Board; provided, however, that such committee members who are not also members of the Board shall only participate in committee actions to the extent permitted by law. In appointing members to committees of the Board, the Chairman is responsible for determining that any such committee meets the composition requirements set forth in this Article IV.

(b) Upon request of the Secretary, each prospective committee member who is not a Director shall provide to the Secretary such information as is reasonably necessary to serve as the basis for a determination of the prospective committee member's classification as an Industry, Non-Industry, or Independent member. The Secretary shall certify to the Board each prospective committee member's classification. Such committee members shall update the information submitted under this subsection at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information. A committee member may not be subject to a statutory disqualification.

(c) The term of office of a committee member shall terminate immediately upon a determination by the Board, by a majority vote of the Directors, (i) that the committee member no longer satisfies the classification for which the committee member was selected; and (ii) that the committee member's continued service as such would violate the compositional requirements of such committee set forth in this Article IV.

(d) Any vacancy occurring in a committee shall be filled by the Chairman for the remainder of the term, with the approval of the Board.

(e) Except as otherwise provided by the By-Laws, members of a committee shall hold office for a one-year period.

Section 4.3 Conduct of Proceedings

Except as otherwise provided in these By-Laws, the Rules, the Charter of the committee or by the Board by resolution, each committee may adopt its own rules of procedure and may meet at stated times or on such notice as such committee may determine. 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 II of these By-Laws. Each committee shall keep regular minutes of its meetings and report the same to the Board when required.

Section 4.4 Voting, Quorum and Action by Committees

Each committee member shall be entitled to one (1) vote. Unless otherwise required by the By-Laws, the Rules or the Charter of the committee, the presence of a majority of the number of committee members serving on a committee shall constitute a quorum for the transaction of business of such committee. If a quorum shall not be present at any meeting of a committee, the committee members present at such meeting may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. The act of a majority of the committee members present at any meeting at which there is a quorum shall be the act of such committee except as may be otherwise specifically provided by statute or these By-Laws, the Rules or the Charter of the committee.

Section 4.5 Specified Board Committees

(a) **Compensation Committee**. The Chairman, with the approval of the Board, shall appoint a Compensation Committee consisting of Non-Industry Directors. The Compensation Committee shall consider and recommend compensation policies, programs, and practices for officers and other employees of the Company.

(b) **Audit Committee**. The Chairman, with the approval of the Board, shall appoint an Audit Committee consisting of Directors. A majority of the Audit Committee members shall be Non-Industry Directors. A Non-Industry Director shall serve as Chairman of the Audit Committee. The Audit Committee shall perform the following primary functions, as well as such other functions as may be specified in the charter of the Audit Committee: (i) provide oversight over the Company's financial reporting process and the financial information that is provided to the LLC Member and others; (ii) provide oversight over the systems of internal controls established by management and the Board and the Company's legal and compliance process; and (iii) direct and oversee all the

activities of the Company's internal audit function, including but not limited to management's responsiveness to internal audit recommendations. The Audit Committee shall have exclusive authority to: (i) hire or terminate the head of the Company's Internal Audit Department; (ii) determine the compensation of the head of the Internal Audit Department; and (iii) determine the budget for the Internal Audit Department. The Internal Audit Department and its head shall report directly to the Audit Committee. The Audit Committee may, in its discretion, direct that the Internal Audit Department also report to senior management of the Company on matters the Audit Committee deems appropriate and may request that senior management of the Company perform such operational oversight as necessary and proper, consistent with preservation of the independence of the internal audit function.

(c) **Regulatory Oversight Committee**. The Chairman, with the approval of the Board, shall appoint a Regulatory Oversight Committee consisting of Non-Industry Directors. The Regulatory Oversight Committee shall oversee the adequacy and effectiveness of Exchange's regulatory and self-regulatory organization responsibilities, and shall be responsible for assessing the Exchange's regulatory performance and recommending compensation and personnel actions involving the Chief Regulatory Officer and senior regulatory personnel to the Board's Compensation Committee for action. The Regulatory Oversight Committee shall also assist the Board and committees of the Board in reviewing the regulatory plan and the overall effectiveness of Exchange's regulatory functions. In furtherance of its functions, the Regulatory Oversight Committee (i) shall review the Exchange's regulatory budget, which shall be approved by the Board of Directors, and shall specifically inquire into the adequacy of resources available in the budget for regulatory activities; and (ii) shall meet regularly with the Chief Regulatory Officer in executive session.

(d) **Appeals Committee**. The Chairman, with the approval of the Board, shall appoint an Appeals Committee. The Appeals Committee shall preside over all appeals related to disciplinary and adverse action determinations in accordance with the Exchange Rules. The Appeals Committee shall consist of one Independent Director, one Industry Director, and one Member Representative Director. If the Independent Director recuses himself or herself from an appeal, due to a conflict of interest or otherwise, such Independent Director may be replaced by a Non-Industry Director for purposes of the applicable appeal if there is no other Independent Director able to serve as the replacement.

(e) **Executive Committee**. The Chairman, with the approval of the Board, may appoint an Executive Committee consisting of Directors, which shall, to the fullest extent permitted by Delaware law and other applicable law, have and be permitted to exercise all the powers and authority of the Board in the management of the business and affairs of the Company between meetings of the Board. The number of Non-Industry Directors on the Executive Committee shall equal or exceed the number of Industry Directors on the Executive Committee. The percentage of Independent Directors on the Executive Committee shall be at least as great as the percentage of Independent Directors on the whole Board, and the percentage of Member Representative Directors on the Executive Committee shall be at least as great as the percentage of Member Representative Directors on the whole Board.

(f) **Finance Committee**. The Chairman, with the approval of the Board, may appoint a Finance Committee consisting of Directors. A majority of the Finance Committee members shall be Non–Industry Directors. The Finance Committee shall advise the Board with respect to the oversight of the financial operations and conditions of the Company, including recommendations for Company's annual operating and capital budgets.

Section 4.6 Quality of Markets Committee.

The Chairman, with the approval of the Board, shall appoint a Quality of Markets Committee. The Quality of Markets Committee shall provide advice and guidance to the Board on issues relating to the fairness, integrity, efficiency and competitiveness of the information, order handling and execution mechanisms of the Exchange from the perspective of investors, both individual and institutional, retail firms, market making firms, Exchange listed companies and other market participants. The Quality of Markets Committee shall include broad representation of participants in the Exchange, including investors, market makers, integrated retail firms and order entry firms. The Quality of Markets Committee shall include a number of Member Representative members that is equal to at least 20 percent of the total number of members of the Quality of Markets Committee. The number of Non-Industry members of the Quality of Markets Committee shall equal or exceed the sum of the number of Industry members and Member Representative members.

Section 4.7 Business Conduct Committee

There shall be a Business Conduct Committee which shall not be a Board Committee but shall be a committee of the Exchange. The Chairman shall appoint a Business Conduct Committee composed of such number of Exchange Members and individuals who are not Exchange Members as the Chairman shall deem necessary, none of whom shall be Directors. The Business Conduct Committee or any panel thereof shall include at least one officer, director or employee of an Exchange Member.

The jurisdiction, function and powers shall be exercised by the Business Conduct Committee in accordance with the provisions set forth in the Exchange Rules.

ARTICLE V
Nominating Committees

Section 5.1 Election of Nominating Committee and Member Nominating Committee

The Nominating Committee and the Member Nominating Committee shall each be elected on an annual basis by vote of the LLC Member. The LLC Member shall appoint the initial Nominating Committee and Member Nominating Committee consistent with the compositional requirements of this Article V within fifteen (15) days after the Exchange's application for registration as a national securities exchange is granted. Because the first annual meeting of the LLC Member is intended to be held within ninety (90) days after the Exchange's application for registration as a national securities exchange is granted, the initial Nominating Committee and Member Nominating Committee shall serve until the second annual meeting of the LLC Member. Not later than sixty (60) days prior to the date announced as the date for each annual meeting of the LLC Member commencing with the second annual meeting of the LLC Member, the Nominating Committee and the Member Nominating Committee shall nominate candidates to serve on the succeeding year's Nominating Committee and Member Nominating Committee, as applicable, and notify the Secretary of such nominees. Such candidates shall be voted on by the LLC Member at the annual meeting of the LLC Member. Additional candidates for the Member Nominating Committee may be nominated and elected pursuant to the same process as provided for in Article II, Section 2.4.

Section 5.2 Nominating Committee

The Nominating Committee shall nominate candidates for election to the Board at the annual LLC Member meeting and all other vacant or new Director positions on the Board. The Nominating Committee, in making such nominations, is responsible for ensuring that candidates meet the compositional requirements of Article II, Section 2.2(b). The number of Non-Industry members on the Nominating Committee shall equal or exceed the number of Industry members on the Nominating Committee. A Nominating Committee member may not simultaneously serve on the Nominating Committee and the Board, unless such member is in his or her final year of service on the Board, and following that year, that member may not stand for election to the Board until such time as he or she is no longer a member of the Nominating Committee. No more than one (1) member of the Nominating Committee shall be a current Director, and such Director shall be a Non-Industry Director.

Section 5.3 Member Nominating Committee

The Member Nominating Committee shall nominate candidates for each Member Representative Director position on the Board that is to be elected by Exchange Members or the LLC Member under the terms of these By-Laws. Each member of the Member Nominating Committee shall be a Member Representative member and shall not be required to be a Director of the Company.

ARTICLE VI
Officers, Agents and Employees

Section 6.1 General

The officers of the Company shall include a Chief Executive Officer, a President, a Chief Financial Officer, a Chief Regulatory Officer, a Secretary, a Treasurer, and such other officers as in the Board's opinion are desirable for the conduct of the business of the Company, including but not limited to a Vice Chairman. Any two or more offices may be held by the same person, except that the offices of the President and Secretary may not be held by the same person. No person that is subject to any statutory disqualification may be an officer of the Company.

Section 6.2 Appointment and Tenure

Each officer of the Company shall be appointed by the Board on an annual basis, and shall hold office until his or her successor is appointed and qualified or until his or her earlier death, disability, disqualification, removal or resignation. An officer may serve for any number of terms, consecutive or otherwise.

Section 6.3 Resignation and Removal of Officers; Vacancies

(a) Any officer may resign at any time upon notice of resignation to the Chairman and Chief Executive Officer, the President, or the Secretary. Any such resignation shall take effect upon receipt of such notice or at any later time specified therein, or if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

(b) Any officer of the Company may be removed, with or without cause, by the Board. Such removal shall be without prejudice to the contractual rights of the affected officer, if any, with the Company.

(c) Vacancies in any office of the Company may be filled for the unexpired term by the Board.

Section 6.4 Compensation

The Compensation of the Chairman, the Vice Chairman and the Chief Executive Officer shall be fixed by the Compensation Committee. The salaries of all other officers and agents of the Company shall be fixed by the Chief Executive Officer, in consultation with the Compensation Committee.

Section 6.5 Powers and Duties; Delegation

Each of the officers of the Company shall, unless otherwise ordered by the Board, have such powers and duties as customarily pertain to the respective office, and such further powers and duties as from time to time may be conferred by the Board, or by an officer delegated such authority by the Board. The Board may delegate the duties and powers of any officer of the Company to any other officer or to any Director for a specified period of time and for any reason that the Board may deem sufficient.

Section 6.6 Chief Executive Officer

The Chief Executive Officer shall be the chief executive officer of the Company, shall have general supervision over the business and affairs of the Company and shall serve at the pleasure of the Board. The Chief Executive Officer shall have all powers and duties usually incident to the office of the Chief Executive Officer, except as specifically limited by a resolution of the Board. The Chief Executive Officer shall exercise such other powers and perform such other duties as may be assigned to the Chief Executive Officer from time to time by the Board.

Section 6.7 President

The President shall, in the absence of the Chairman, the Vice Chairman and Chief Executive Officer, preside at all meetings of the Board at which the President is present. The President shall have general supervision over the operations of the Company. The President shall have all powers and duties usually incident to the office of the President, except as specifically limited by a resolution of the Board. The President shall exercise such other powers and perform such other duties as may be assigned to the President from time to time by the Board.

Section 6.8 Vice President

The Board shall appoint one or more Vice Presidents. In the absence or disability of the President or if the office of President becomes vacant, the Vice Presidents in the order determined by the Board, or if no such determination has been made, in the order of their seniority, shall perform the duties and exercise the powers of the President, subject to the right of the Board at any time to extend or restrict such powers and duties or to assign them to others. Any Vice President may have such additional designations in such Vice President's title as the Board may determine. The Vice

Presidents shall generally assist the President in such manner as the President shall direct. Each Vice President shall exercise such other powers and perform such other duties as may be assigned to such Vice President from time to time by the Board, the Chief Executive Officer or the President. The term "Vice President" used in this Section shall include the positions of Executive Vice President, Senior Vice President, and Vice President.

Section 6.9 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 Company's funds and securities; shall keep full and accurate all books and accounts of the Company 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 Company as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Company 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 Company.

Section 6.10 Chief Regulatory Officer

An officer of the Company with the position of Vice President, Senior Vice President or Executive Vice President shall be designated as the Chief Regulatory Officer of the Company. The Chief Regulatory Officer shall have general supervision of the regulatory operations of the Company, including responsibility for overseeing the Company's surveillance, examination, and enforcement functions and for administering any regulatory services agreements with another self-regulatory organization to which the Company is a party. The Chief Regulatory Officer shall report to the Regulatory Oversight Committee. The Chief Regulatory Officer shall meet with the Regulatory Oversight Committee of the Company in executive session at regularly scheduled meetings of such committee, and at any time upon request of the Chief Regulatory Officer or any member of the Regulatory Oversight Committee. The Chief Regulatory Officer may, but is not required to, also serve as the General Counsel of the Company.

Section 6.11 Secretary

The Secretary shall act as Secretary of all meetings of the Board at which the Secretary is present, shall record all the proceedings of all such meetings in a book to be kept for that purpose, shall have supervision over the giving and service of notices of the Company, and shall have supervision over the care and custody of the books and records of the Company. The Secretary shall be empowered to affix the Company's seal, if any, to documents, the execution of which on behalf of the Company under its seal is duly authorized, and when so affixed, may attest the same. The Secretary shall have all powers and duties usually incident to the office of Secretary, except as specifically limited by a resolution of the Board. The Secretary shall exercise such other powers and perform such other duties as may be assigned to the Secretary from time to time by the Board, the Chief Executive Officer or the President.

Section 6.12 Assistant Secretary

In the absence of the Secretary or in the event of the Secretary's inability or refusal to act, any Assistant Secretary, approved by the Board, shall exercise all powers and perform all duties of

the Secretary. An Assistant Secretary shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Secretary from time to time by the Board or the Secretary.

Section 6.13 Treasurer

The Treasurer shall have general supervision over the care and custody of the funds and over the receipts and disbursements of the Company and shall cause the funds of the Company to be deposited in the name of the Company in such banks or other depositories as the Board may designate. The Treasurer shall have supervision over the care and safekeeping of the securities of the Company. The Treasurer shall have all powers and duties usually incident to the office of Treasurer except as specifically limited by a resolution of the Board. The Treasurer shall exercise such other powers and perform such other duties as may be assigned to the Treasurer from time to time by the Board, the Chief Executive Officer or the President.

Section 6.14 Assistant Treasurer

In the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, any Assistant Treasurer, approved by the Board, shall exercise all powers and perform all duties of the Treasurer. An Assistant Treasurer shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Treasurer from time to time by the Board or the Treasurer.

ARTICLE VII
Indemnification and Insurance

Section 7.1 Right to Indemnification

Each person who was or is made a party or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she or a person of whom he or she is the legal representative is or was a director or an officer of the Company or is or was serving at the request of the Company as a director, officer, employee or agent of any other corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to any employee benefit plan (hereinafter an "indemnitee"), whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Company to the fullest extent authorized by the LLC Act, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Company to provide broader indemnification rights than the LLC Act permitted the Company to provide prior to such amendment), against all expense, liability and loss (including, without limitation, attorneys' fees, judgments, fines, excise taxes or penalties under the Employee Retirement Income Security Act of 1974, as amended, and amounts paid or to be paid in settlement) reasonably incurred by such indemnitee in connection therewith; provided, however, that except as provided in Section 7.3 with respect to proceedings seeking to enforce rights to indemnification, the Company shall indemnify any such indemnitee seeking indemnification in connection with a proceeding (or part thereof) initiated by such indemnitee only if such proceeding (or part thereof) was authorized by the Board of Directors.

Section 7.2 Right to Advancement of Expenses

The right to indemnification conferred in Section 7.1 shall include the right to be paid by the Company the expenses (including attorneys' fees) incurred in defending any such proceeding in advance of its final disposition (hereinafter an "advancement of expenses"); provided, however, that, if the LLC Act requires, an advancement of expenses incurred by an indemnitee in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Company of an undertaking (hereinafter an "undertaking"), by or on behalf of such indemnitee, 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 (hereinafter a "final adjudication") that such indemnitee is not entitled to be indemnified for such expenses under this Section 7.2 or otherwise.

Section 7.3 Right of Indemnitee to Bring Suit

If a claim under Section 7.1 or Section 7.2 is not paid in full by the Company within thirty (30) days after a written claim has been received by the Company, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty (20) days, the indemnitee may at any time thereafter bring suit against the Company to recover the unpaid amount of the claim. If successful in whole or in part in any such suit, or in a suit brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the indemnitee shall also be entitled to be paid the expense of prosecuting or defending such suit.

In (i) any suit brought by the indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the indemnitee to enforce a right of an advancement of expenses) it shall be a defense that, and (ii) in any suit brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the Company shall be entitled to recover such expenses upon a final adjudication that, the indemnitee has not met any applicable standard for indemnification set forth in the LLC Act. Neither the failure of the Company (including its Board of Directors, independent legal counsel or the LLC Member) to have made a determination prior to the commencement of such action that indemnification of the indemnitee is proper in the circumstances because the indemnitee has met the applicable standard of conduct set forth in the Act, nor an actual determination by the Company (including its Board of Directors, independent legal counsel or the LLC Member) that the indemnitee has not met such applicable standard of conduct, shall create a presumption that the indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the indemnitee, be a defense to such suit. In any suit brought by the indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article VII or otherwise shall be on the Company.

Section 7.4 Non-Exclusivity of Rights

The right to indemnification and the advancement of expenses conferred in this Article VII shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, provision of the LLC Agreement, provision of these By-Laws, agreement, vote of the LLC Member or disinterested directors or otherwise.

Section 7.5 Insurance

The Company may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Company or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the Company would have the power to indemnify such person against such expense, liability or loss under the law.

Section 7.6 Indemnification of Employees and Agents of the Company

The Company may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification, and rights to the advancement of expenses, to any employee or agent of the Company to the fullest extent of the provisions of this Article VII with respect to the indemnification and advancement of expenses of directors and officers of the Company.

Section 7.7 Contract Rights

The rights to indemnification and to the advancement of expenses conferred in Section 7.1 and Section 7.2 shall be contract rights and such rights shall continue as to an indemnitee who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the indemnitee's heirs, executors and administrators.

Section 7.8 Company Not Liable

Except as provided in the Exchange Rules, the Company shall not be liable for any loss or damage sustained by any current or former Exchange Member growing out of the use or enjoyment by such Exchange Member of the facilities afforded by the Company (or any predecessor or successor thereof) or its subsidiaries.

ARTICLE VIII
Amendments; Emergency By-Laws

Section 8.1 By the LLC Member or Board

These By-Laws may be altered, amended, or repealed, or new By-Laws may be adopted, (i) by the written consent of the LLC Member, or (ii) at any regular or special meeting of the Board by a resolution adopted by the Board.

Section 8.2 Emergency By-Laws

The Board may adopt emergency By-Laws subject to repeal or change by action of the LLC Member which shall, notwithstanding any different provision of law, the Certificate of Formation, the LLC Agreement or these By-Laws, be operative during any emergency resulting from any nuclear or atomic disaster, an attack on the United States or on a locality in which the Company conducts its business or customarily holds meetings of the Board, any catastrophe, or other emergency condition, as a result of which a quorum of the Board or a committee thereof cannot readily be convened for action. Such emergency By-Laws may make any provision that may be practicable and necessary under the circumstances of the emergency.

Section 8.3 Authority to Take Action Under Extraordinary Market Conditions

The Board, or such person or persons as may be designated by the Board, in the event of extraordinary market conditions, shall have the authority to take any action regarding:

(a) the trading in or operation of the national securities exchange operated by the Company or any other organized securities markets that may be operated by the Company, the operation of any automated system owned or operated by the Company, and the participation in any such system or any or all persons or the trading therein of any or all securities; and

(b) the operation of any or all systems of Exchange Members, if, in the opinion of the Board or the person or persons hereby designated, such action is necessary or appropriate for the protection of investors or the public interest or for the orderly operation of the marketplace or the system.

Section 8.4 Commission Approval

Before any amendment to, alteration or repeal of any provision of the By-Laws of the Company under this Article VIII 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 Commission, then the proposed changes to the By-Laws of the Company shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

ARTICLE IX
Exchange Authorities

Section 9.1 Rules

The Board, acting in accordance with the terms of these By-Laws and the Rules, shall be vested with all powers necessary for the government of the Company as an "exchange" within the meaning of the Act. To promote and enforce just and equitable principles of trade and business, to maintain high standards of commercial honor and integrity among Exchange Members, to collaborate with governmental and other agencies in the promotion of fair practices and the elimination of fraud, and in general to carry out the purposes of the Company and of the Act, the Board is hereby authorized to adopt such rules and such amendments thereto as it may, from time to time, deem necessary or appropriate. If any such rules or amendments thereto are approved by the Commission or otherwise become effective as provided in the Act, they shall become operative Exchange Rules as of the date of Commission approval or effectiveness under the Act unless a later operative date is declared by the Company. The Board is hereby authorized, subject to the provisions of these By-Laws and the Act, to administer, enforce, interpret, issue exemptions from, suspend, or cancel any Rules adopted hereunder.

Section 9.2 Disciplinary Proceedings

(a) The Board is authorized to establish procedures relating to disciplinary proceedings involving Exchange Members and their associated persons.

(b) The Board is authorized to impose appropriate sanctions applicable to Exchange Members, including censure, fine, suspension, or expulsion from membership, suspension or bar

from being associated with all Exchange Members, limitation of activities, functions, and operations of an Exchange Member, or any other fitting sanction, and to impose appropriate sanctions applicable to persons associated with Exchange Members, including censure, fine, suspension, or barring a person associated with an Exchange Member from being associated with all Exchange Members, limitation of activities, functions, and operations of a person associated with an Exchange Member, or any other fitting sanction, for:

(i) a breach by an Exchange Member or a person associated with an Exchange Member of any covenant with the Company or its LLC Member;

(ii) violation by an Exchange Member or a person associated with an Exchange Member of any of the terms, conditions, covenants, and provisions of the By-Laws, the Rules, or the federal securities laws, including the rules and regulations adopted thereunder;

(iii) failure by an Exchange Member or person associated with an Exchange Member to: (A) submit a dispute for arbitration as may be required by the Rules; (B) appear or produce any document in the Exchange Member's or person's possession or control as directed pursuant to the Rules; (C) comply with an award of arbitrators properly rendered, where a timely motion to vacate or modify such award has not been made pursuant to applicable law or where such a motion has been denied; or (D) comply with a written and executed settlement agreement obtained in connection with an arbitration or mediation submitted for disposition; or

(iv) failure by an Exchange Member or person associated with an Exchange Member to adhere to any ruling, order, direction, or decision of or to pay any sanction, fine, or costs imposed by the Board or any entity to which the Board has delegated its powers.

Section 9.3 Membership Qualifications

(a) The Board shall have authority to adopt rules and regulations applicable to Exchange Members, applicants seeking to become Exchange Members, and persons associated with applicants or Exchange Members, establishing specified and appropriate standards with respect to the training, experience, competence, financial responsibility, operational capability, and such other qualifications as the Board finds necessary or desirable.

(b) The Board may from time to time make such changes in such rules, regulations, and standards as it deems necessary or appropriate.

(c) Uniform standards for regulatory and other access issues, such as admission to membership and conditions to becoming an Exchange market maker, shall be promulgated and applied on a consistent basis, and the Company shall institute safeguards to ensure fair and evenhanded access to all of its services and facilities.

Section 9.4 Fees, Dues, Assessments, and Other Charges

The Board shall have authority to fix and levy the amount of fees, dues, assessments, and other charges to be paid by Exchange Members and issuers and any other persons using any facility or system that the Company operates or controls; provided, however, that such fees, dues, assessments, and other charges shall be equitably allocated among Exchange Members and any other persons using any facility or system that the Company operates or controls. Any Regulatory Funds

will not be used for non-regulatory purposes or distributed to the LLC Member, but rather, shall be applied to fund the legal and regulatory operations of the Company (including surveillance and enforcement activities), or, as the case may be, shall be used to pay restitution and disgorgement of funds intended for customers.

ARTICLE X
Miscellaneous Provisions

Section 10.1 Operational Date of Exchange

The Company has been formed in anticipation of its registration by the Commission as a national securities exchange. During the period between formation and the first date on which the Company commences operating a national securities exchange (the "Operational Date"):

(a) references in the Agreement and By-Laws to "the national securities exchange operated by the Company" shall be construed as references to "the national securities exchange to be operated by the Company"; and

(b) the Board of Directors of the Company may appoint members of the committees to be established under the By-Laws, but shall not be required to appoint all such committee members until the date immediately prior to the Operational Date.

Section 10.2 Fiscal Year

The fiscal year of the Company shall be as determined from time to time by the Board.

Section 10.3 Participation in Board and Committee Meetings

All meetings of the Board (and any committees of the Company) pertaining to the self-regulatory function of the Company (including disciplinary matters) shall be closed to all persons other than members of the Board, officers, staff, counsel or other advisors whose participation is necessary or appropriate to the proper discharge of such regulatory functions and any representatives of the Commission. In no event shall members of the Board of Directors of Miami International Holdings, Inc. who are not also members of the Board, or any officers, staff, counsel or advisors of Miami International Holdings, Inc. who are not also officers, staff, counsel or advisors of the Company (or any committees of the Company), be allowed to participate in any meetings of the Board (or any committee of the Company) pertaining to the self-regulatory function of the Company (including disciplinary matters).

Section 10.4 Books and Records; Confidentiality of Information and Records Relating to SRO Function

The books and records of the Company shall be maintained at a location within the United States. All books and records of the Company reflecting confidential information pertaining to the self-regulatory function of the Company (including but not limited to disciplinary matters, trading data, trading practices, and audit information) shall be retained in confidence by the Company and its personnel and will not be used by the Company for any non-regulatory purposes and shall not be made available to any person (including, without limitation, any Exchange Member) other than to personnel of the Commission, and those personnel of the Company, members of committees of the

Company, members of the Board, hearing officers and other agents of the Company to the extent necessary or appropriate to properly discharge the self-regulatory responsibilities of the Company.

Section 10.5 Execution of Instruments, Contracts, etc.

(a) All checks, drafts, bills of exchange, notes, or other obligations or orders for the payment of money shall be signed in the name of the Company by such officer or officers or person or persons as the Board, or a duly authorized committee thereof, may from time to time designate. Except as otherwise provided by law, the Board, any committee given specific authority in the premises by the Board, or any committee given authority to exercise generally the powers of the Board during intervals between meetings of the Board may authorize any officer, employee, or agent, in the name of and on behalf of the Company, to enter into or execute and deliver deeds, bonds, mortgages, contracts, and other obligations or instruments, and such authority may be general or confined to specific instances.

(b) All applications, written instruments, and papers required by any department of the United States government or by any state, county, municipal, or other governmental authority may be executed in the name of the Company by any officer of the Company, or, to the extent designated for such purpose from time to time by the Board, by an employee or agent of the Company. Such designation may contain the power to substitute, in the discretion of the person named, one or more other persons.

Section 10.6 Power to Vote Stock

Unless otherwise instructed by the Board, the Chairman or the Chief Executive Officer of the Company shall have the power and authority on behalf of the Company to attend and to vote at any meeting of the stockholders, partners or equity holders of any corporation, partnership or any other entity in which the Company may hold stock, partnership or other equity interests, as the case may be, and may exercise on behalf of the Company any and all of the rights and powers incident to the ownership of such stock, partnership or other equity interest at such meeting, and shall have the power and authority to execute and deliver proxies, waivers and consents on behalf of the Company in connection with the exercise by the Company of the rights and powers incident to the ownership of such stock, partnership or other equity interest. The Board may from time to time confer like powers upon any other person or persons.

Section 10.7 Severability

If any provision of these By-Laws, or the application of any provision of these By-Laws to any person or circumstances, is held invalid, the remainder of these By-Laws and the application of such provision to other persons or circumstances shall not be affected.

Effective Date: December 5, 2016

Exhibit B

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:

The Rules of the Exchange dated as of June 6, 2019, are attached.

MIAX PEARL, LLC

RULES

As of June 6, 2019

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CHAPTER I. DEFINITIONS

Rule 100. Definitions

ABBO or Away Best Bid or Offer
The term "**ABBO**" or "**Away Best Bid or Offer**" means the best bid(s) or offer(s) disseminated by other Eligible Exchanges (defined in Rule 1400(f)) and calculated by the Exchange based on market information received by the Exchange from OPRA.

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

Aggregate Exercise Price
The term "**aggregate exercise price**" means the exercise price of an option contract multiplied by the number of units of the underlying security covered by the option contract.

American-Style Option
The term "**American-style option**" means an option contract that, subject to the provisions of Rule 700 (relating to the cutoff time for exercise instructions) and to the Rules of the Clearing Corporation, can be exercised on any business day prior to its expiration date and on its expiration date.

Associated Person or Person Associated with a Member
The term "**associated person**" or "**person associated with a Member**" means any partner, officer, director, or branch manager of a Member (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with a Member, or any employee of a Member.

Bid
The term "**bid**" means a limit order to buy one or more options contracts.

Board
The term "**Board**" means the Board of Directors of the Exchange.

Book
The term "**Book**" means the electronic book of buy and sell orders and quotes maintained by the System.

By-Laws
The term "**By-Laws**" means the By-Laws of the Exchange, as the same may be amended from time to time.

Call
The term "**call**" means an option contract under which the holder of the option has the right, in accordance with the terms of the option, to purchase from the Clearing Corporation the number of units of the underlying security covered by the option contract.

Class of Options or Option Class
The terms "**class of options**" or "**option class**" mean all option contracts covering the same underlying security.

Clearing Corporation
The term "**Clearing Corporation**" means The Options Clearing Corporation.

Clearing Member
The term "**Clearing Member**" means a Member that has been admitted to membership in the Clearing Corporation pursuant to the provisions of the Rules of the Clearing Corporation.

Closing Purchase Transaction
The term "**closing purchase transaction**" means an Exchange Transaction which will reduce or eliminate a short position in an option contract.

Closing Writing Transaction
The term "**closing writing transaction**" means an Exchange Transaction which will reduce or eliminate a long position in an option contract.

Control
The term "**control**" means the power to exercise a controlling influence over the management or policies of a person, unless such power is solely the result of an official position with such person. Any person who owns beneficially, directly or indirectly, more than 20% of the voting power in the election of directors of a corporation, or more than 25% of the voting power in the election of directors of any other corporation which directly or through one or more affiliates owns beneficially more than 25% of the voting power in the election of directors of such corporation, shall be presumed to control such corporation.

Covered
The term "**covered**" in respect of a short position in a call option contract means that the writer's obligation is secured by a "specific deposit" or an "escrow deposit" meeting the conditions of Rule 610(f) or 610(h), respectively, of the Rules of the Clearing Corporation, or the writer holds in the same account as the short position, on a share-for-share basis, a long position either in the underlying security or in an option contract of the same class of options where the exercise price of the option contract in such long position is equal to or less than the exercise price of the option contract in such short position. The term "covered" in respect of a short position in a put option contract means that the writer holds in the same account as the short position, on a share-for-share basis, a long position in an option contract of the same type and class of options where the exercise price of the option contract in such long position is equal to or greater than the exercise price of the option contract in such short position.

Discretion
The term "**discretion**" means the authority of a broker or dealer to determine for a customer the type of option, the class or series of options, the number of contracts, or whether options are to be bought or sold.

Electronic Exchange Member
The term "**Electronic Exchange Member**" or "**EEM**" means the holder of a Trading Permit who is a Member representing as agent Public Customer Orders or Non-Customer Orders on the Exchange and those non-Market Maker Members conducting proprietary trading. Electronic Exchange Members are deemed "members" under the Exchange Act.

European-Style Option
The term "**European-style option**" means an option contract that, subject to the provisions of Rule 700 (relating to the cutoff time for exercise instructions) and to the Rules of the Clearing Corporation, can be exercised only on its expiration date.

Exchange
The term "**Exchange**" means the national securities exchange known as MIAX PEARL, LLC, or MIAX PEARL.

Exchange Act
The term "**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

Exchange Transaction
The term "**Exchange Transaction**" means a transaction involving a security that is effected on the Exchange.

Exercise Price
The term "**exercise price**" means the specified price per unit at which time the underlying security may be purchased or sold upon the exercise of an option contract.

Federal Reserve Board
The term "**Federal Reserve Board**" means the Board of Governors of the Federal Reserve System.

FIX Interface
The term **"FIX Interface"** means the Financial Information Exchange interface used for submitting certain order types (as set forth in Rule 516) to the MIAX PEARL System.

Foreign Broker-Dealer
The term "**foreign broker-dealer**" means any person or entity that is registered, authorized or licensed by a foreign governmental agency or foreign regulatory organization (or is required to be so registered, authorized or licensed) to perform the function of a broker or dealer in securities, or both. For the purposes of this definition, the terms "broker" and "dealer" have the same meaning as provided in Section 3(a)(4) and 3(a)(5) of the Exchange Act, except that a "broker" or "dealer" may be a bank.

He, Him or His
The terms "**he**," "**him**" or "**his**" shall be deemed to refer to persons of female as well as male gender, and to include organizations, as well as individuals, when the context so requires.

Help Desk
The term "**Help Desk**" means the Exchange's control room consisting of Exchange staff authorized to make certain trading determinations on behalf of the Exchange. The Help Desk shall report to and be supervised by a senior executive officer of the Exchange.

Individual Option
The term "**individual option**" means an option contract that is either a put or a call, covering a specific underlying security and having a specific exercise price and expiration date.

Long Position
The term "**long position**" means a person's interest as the holder of one or more units of trading of a given option contract.

Market Maker
The term "**Market Maker**" or "**MM**" means a Member registered with the Exchange for the purpose of making markets in options contracts traded on the Exchange and that is vested with the rights and responsibilities specified in Chapter VI of these Rules.

Member
The term "**Member**" means an individual or organization that is registered with the Exchange pursuant to Chapter II of these Rules for purposes of trading on the Exchange as an "Electronic Exchange Member" or "Market Maker." Members are deemed "members" under the Exchange Act.

Membership
The term "**Membership**" refers to the trading privileges held by a Member.

MEO Interface
The term **"MEO Interface"** means a binary order interface used for submitting certain order types (as set forth in Rule 516) to the MIAX PEARL System.

MIAX
The term "**MIAX**" means Miami International Securities Exchange, LLC.

MIAX Emerald
The term "**MIAX Emerald**" means MIAX Emerald, LLC.

MIAX PEARL
The term "**MIAX PEARL**" means the MIAX PEARL, LLC, or the Exchange.

MPID
The term "**MPID**" means unique market participant identifier.

NBBO
The term "**NBBO**" means the national best bid or offer as calculated by the Exchange based on market information received by the Exchange from OPRA.

Non-Customer
The term "**Non-Customer**" means a person or entity that is a broker or dealer in securities.

Non-Customer Order
The term "**Non-Customer Order**" means an order for the account of a Non-Customer.

Offer
The term "**offer**" means a limit order to sell one or more options contracts.

Opening Purchase Transaction
The term "**opening purchase transaction**" means an Exchange Transaction which will create or increase a long position in an option contract.

Opening Writing Transaction
The term "**opening writing transaction**" means an Exchange Transaction which will create or increase a short position in an option contract.

OPRA
The term "**OPRA**" means the Options Price Reporting Authority, LLC.

Option Contract
The term "**option contract**" means a put or a call issued, or subject to issuance, by the Clearing Corporation pursuant to the Rules of the Clearing Corporation.

Options Principal
The term "**Options Principal**" means a person engaged in the management and supervision of the Member's business pertaining to option contracts that has responsibility for the overall oversight of the Member's options related activities on the Exchange.

Order
The term "**order**" means a firm commitment to buy or sell option contracts.

Outstanding
The term "**outstanding**" in respect of an option contract means an option contract which has been issued by the Clearing Corporation and has neither been the subject of a closing writing transaction nor has reached its expiration date.

PBBO
The term "**PBBO**" means the best bid or offer on the PEARL Exchange.

Primary Market
The term "**primary market**" means the principal market in which an underlying security is traded.

Principal Shareholder
The term "**principal shareholder**" means any person beneficially owning, directly or indirectly, equity securities representing 5% of the voting power in elections of directors, or 5% of the net worth, or a 5% participation in the net profits, of a corporation.

Priority Customer
The term "**Priority Customer**" means a person or entity that (i) is not a broker or dealer in securities, and (ii) does not place more than 390 orders in listed options per day on average during a calendar month for its own beneficial account(s). The number of orders shall be counted in accordance with the following Interpretation and Policy .01 hereto.

Interpretations and Policies:

.01 For purposes of counting the number of orders in listed options per day on average during a calendar month for its own beneficial account(s) for designation as Priority Customer under Rule 100:

(a) Except as noted below, each order of any type, regardless of the options exchange on which the order is entered or to which the order is routed, shall be counted as one (1) order toward the number of orders, except that Flexible Exchange Option (FLEX) orders shall not be counted.

(b) Complex orders comprised of eight (8) options legs or fewer shall be counted as a single order. For complex orders comprised of nine (9) options legs or more, each leg shall count as its own separate order. Stock orders shall not be counted toward the number of legs.

(c) A "parent" order placed for the beneficial account(s) of a person or entity not a broker or dealer that is broken into multiple subordinate "child" orders on the same side (buy/sell) and series as the parent order, by a broker or dealer or an algorithm housed at a broker or dealer or licensed from a broker dealer but housed with the customer, shall be counted as one (1) order, even if the orders are routed away. A "parent" order (including a strategy order) that is broken into multiple subordinate "child" orders on both sides (buy/sell) of a series and/or multiple series shall be counted as multiple orders, with each child order counted as a new and separate order per side and series.

(d) (1) An order that cancels and replaces a prior order shall be counted as a second order, or multiple new orders in the case of a complex order comprised of nine (9) options legs or more, including "single-strike algorithms." A series of cancel and replace orders in an individual strike, which track the PBBO or NBBO, shall be counted as separate new orders. A cancel message is not an order.

(2) Except as noted in paragraph (d)(3) below, an order that cancels and replaces a subordinate "child" order on the same side and series as the "parent" order shall not be counted as a new order.

(3) An order that cancels and replaces a subordinate "child" order and results in multiple sides/series shall be counted as a new order per side and series. An order that cancels and replaces a subordinate "child" order pegged to the PBBO or NBBO, shall be counted as a new order each time a cancel/replace is used to follow the PBBO or NBBO.

Priority Customer Order
The term "**Priority Customer Order**" means an order for the account of a Priority Customer.

Public Customer
The term "**Public Customer**" means a person that is not a broker or dealer in securities.

Public Customer Order
The term "**Public Customer Order**" means an order for the account of a Public Customer.

Put
The term "**put**" means an option contract under which the holder of the option has the right, in accordance with the terms and provisions of the option, to sell to the Clearing Corporation the number of units of the underlying security covered by the option contract.

Quarterly Options Series
The term "**Quarterly Options Series**" is a series in an options class that is approved for listing and trading on the Exchange in which the series is opened for trading on any business day and that expires at the close of business on the last business day of a calendar quarter.

Quote or Quotation
The term "**quote**" or "**quotation**" means a bid or offer entered by a Market Maker as a firm order that updates the Market Maker's previous bid or offer, if any. When the term order is used in these Rules and a bid or offer is entered by the Market Maker in the option series to which such Market Maker is registered, such order shall, as applicable, constitute a quote or quotation for purposes of these Rules.

Responsible Person
The term "**Responsible Person**" shall mean an individual designated by an organization that is the holder of a Trading Permit to represent the organization with respect to that Trading Permit in all matters relating to the Exchange. The Responsible Person must be a United States-based officer, director or management-level employee of the Trading Permit holder, who is responsible for the direct supervision and control of associated persons of that Trading Permit holder.

Rules
The term "**Rules**" means the Rules of the Exchange as the same may be in effect from time to time.

Rules of the Clearing Corporation
The term "**Rules of the Clearing Corporation**" means the Certificate of Incorporation, the By-Laws and the Rules of the Clearing Corporation, and all written interpretations thereof, as the same may be in effect from time to time.

SEC or Commission
The term "**SEC**" or "**Commission**" means the United States Securities and Exchange Commission.

Series of Options
The term "**series of options**" means all option contracts of the same class having the same exercise price and expiration date.

Short Position
The term "**short position**" means a person's interest as the writer of one or more units of trading of a given option contract.

Short Term Option Series
The term "**Short Term Option Series**" is a series in an option class that is approved for listing and trading on the Exchange in which the series is opened for trading on any Monday, Tuesday, Wednesday, Thursday or Friday that is a business day and that expires on the Monday, Wednesday or Friday of the next business week, or, in the case of a series that is listed on a Friday and expires on a Monday, is listed one business week and one business day prior to that expiration. If a Tuesday, Wednesday, Thursday or Friday is not a business day, the series may be opened (or shall expire) on the first business day immediately prior to that Tuesday, Wednesday, Thursday or Friday, respectively. For a series listed pursuant to this section for Monday expiration, if a Monday is not a business day, the series shall expire on the first business day immediately following that Monday.

SRO
The term "**SRO**" means a self-regulatory organization as defined in Section 3(a)(26) of the Exchange Act.

System
The term "**System**" means the automated trading system used by the Exchange for the trading of securities.

Trading Permit
The term "**Trading Permit**" means a permit issued by the Exchange that confers the ability to transact on the Exchange.

Type of Option
The term "**type of option**" means the classification of an option contract as either a put or a call.

Uncovered
The term "**uncovered**" in respect of a short position in an option contract means that the short position is not covered.

Underlying Security
The term "**underlying security**" in respect of an option contract means the security which the Clearing Corporation shall be obligated to sell (in the case of a call option contract) or purchase (in the case of a put option contract) upon the valid exercise of the option contract.

Voluntary Professional
The term "**Voluntary Professional**" means any Public Customer that elects, in writing, to be treated in the same manner as a broker or dealer in securities for purposes of the Exchange's schedule of fees.

[Adopted: December 13, 2016; amended February 6, 2017 (SR-PEARL-2017-03); amended April 3, 2017 (SR-PEARL-2017-11); amended June 5, 2017 (SR-PEARL-2017-21); amended February 12, 2018 (SR-PEARL-2018-03); amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER II. ACCESS

Rule 200. Trading Permits

(a) **Issuance**. The Exchange shall issue Trading Permits that confer the ability to transact on the Exchange. There is no limit on the number of Trading Permits that may be issued by the Exchange; however the Exchange shall have the authority to limit or decrease the number of Trading Permits it has determined to issue. The Exchange shall announce in advance any limitation or decrease it plans to impose pursuant to this Rule. In the event the Exchange imposes a limitation or decrease pursuant to this Rule, the Exchange, in doing so, may not eliminate the ability of an existing Member to trade on the Exchange unless the Exchange is permitted to do so pursuant to a rule filing submitted to the Commission under Section 19(b) of the Exchange Act. In addition, in no event shall the Exchange act in a manner under this subparagraph that does not comply with the provisions of Section 6(c)(4) of the Exchange Act.

(b) **Qualification Requirements**. A Member must be registered as a broker-dealer pursuant to Section 15 of the Exchange Act. If a Member intends to transact business with the public, it must obtain approval to transact business with the public pursuant to Rule 1300 or be approved to transact business with the public by another national securities exchange as set forth in Rule 1300.

(c) **Application Process**.

(1) **Holders of MIAX or MIAX Emerald Trading Permits.** A holder of a MIAX or MIAX Emerald trading permit in good standing is eligible to receive one MIAX PEARL Trading Permit in the same Membership category to trade on MIAX PEARL (i.e., a MIAX Registered Market Maker or a MIAX Emerald Registered Market Maker is eligible to become a MIAX PEARL Market Maker and a MIAX Electronic Exchange Member or a MIAX Emerald Electronic Exchange Member is eligible to become a MIAX PEARL Electronic Exchange Member). A holder of a MIAX or MIAX Emerald trading permit who wishes to apply to the Exchange is not required to complete and submit an Exchange application. Instead only Exchange forms concerning election to trade on the Exchange, submitting to Exchange jurisdiction, and operational matters need be completed and tendered.

(2) **Applicants Not Holding MIAX Trading Permits**. An applicant not holding a MIAX or MIAX Emerald trading permit seeking to hold a MIAX PEARL Trading Permit ("Applicant") must submit an application to the Exchange in accordance with such procedures as shall be established by the Exchange. In addition, the following shall apply:

(i) Each Applicant shall promptly update the application materials submitted to the Exchange if any of the information provided in these materials becomes inaccurate or incomplete after the date of submission of the application to the Exchange and prior to any approval of the application.

(ii) The Exchange shall investigate each Applicant applying to be a Member (with the exception of any Applicant that was a Member within 9 months prior to the date of receipt of that Applicant's application by the Exchange, and any Applicant that was investigated by the Exchange within 9 months prior to the date of receipt of that Applicant's application by the Exchange). The Exchange may investigate any Applicant that is not required to be investigated pursuant to this paragraph. In connection with an investigation conducted pursuant to this paragraph, the Exchange may (x) conduct a fingerprint based criminal records check of the Applicant and its Responsible Person; or (y) utilize the results of a fingerprint based criminal records check of the Applicant and its Responsible Person conducted by the Exchange or another self-regulatory organization within the prior year.

(iii) The Exchange may approve an application submitted pursuant to this Rule only if any investigation pursuant to paragraph (ii) above has been completed, and any applicable orientation and/or exam requirements established by the Exchange have been satisfied.

(iv) Each Applicant that submits an application pursuant to paragraph (c) of this Rule shall submit to the Exchange any additional information requested by the Exchange in connection with the Exchange's review of the application and may be required to appear before the Exchange for an in-person interview or interviews.

(v) Upon completion of the application process, the Exchange shall determine whether to approve or disapprove the application, unless there is just cause for delay. One such just cause for delay is when an Applicant is the subject of an inquiry, investigation, or proceeding conducted by a self-regulatory organization or governmental authority that involves the Applicant's fitness to be a Member. In such an instance, the Exchange need not act on any application submitted by that Applicant until the matter has been resolved.

(vi) Written notice of the action regarding an application to become a Member, specifying in the case of disapproval of an application the grounds thereof, shall be provided to the Applicant.

(d) **Membership in Another Registered Options Exchange**. Every Trading Permit holder must have and maintain membership in another registered options exchange other than the MIAX or MIAX Emerald (that is not registered solely under Section 6(g) of the Exchange Act). If such other registered options exchange has not been designated by the Commission, pursuant to Rule 17d-1 under the Exchange Act, to examine Members for compliance with financial responsibility rules, then such Applicant must have and maintain a membership in FINRA.

(e) **Rights of Member**. No rights shall be conferred upon a Member except those set forth in the By-Laws or Rules as amended from time to time. A Trading Permit shall not convey any ownership interest in the Exchange. Trading Permits may not be leased and are not transferable except in the event of a change in control or corporate reorganization involving a Member. In such a case, Member status may be transferred to a qualified affiliate or successor upon written notice to the Exchange.

(f) **Fees and Charges for Trading Permits**. Trading Permits shall be subject to such fees and charges as are established by the Exchange from time to time pursuant to Rule 1202 and Rule 1203 and the Exchange Fee Schedule. An organization holding a Trading Permit in its name shall be responsible for paying all fees and charges for that Trading Permit. An individual holding a Trading Permit in his or her name shall be responsible for paying all fees and charges for that Trading Permit.

(g) **Exchange Jurisdiction over Trading Members**. Every Member shall be subject to the regulatory jurisdiction of the Exchange under the Exchange Act and the Rules, including without limitation the Exchange's disciplinary jurisdiction under Chapter X of the Rules.

[Adopted: December 13, 2016; amended May 24, 2019 (SR-PEARL-2019-16)]

Rule 201. Denial of and Conditions to Being a Member

(a) The Exchange shall deny Membership where an Applicant (as defined in Rule 200(c)(2)) has failed a required Membership test.

(b) The Exchange may deny (or may condition) Membership or may prevent a person from becoming associated (or may condition an association) with a Member for the same reasons that the Commission may deny or revoke a broker-dealer registration and for those reasons required or allowed under the Exchange Act.

(c) The Exchange also may deny (or may condition) Membership or may prevent a person from becoming associated (or may condition an association) with a Member when the Applicant:

(1) is a broker-dealer and (i) has a net worth (excluding personal assets) below $25,000 if the applicant is an individual, (ii) has a net worth (excluding personal assets) below $50,000 if the applicant is an organization, (iii) has financial difficulties involving an amount that is more than 5% of the applicant's net worth, or (iv) has a pattern of failure to pay just debts;

(2) is unable satisfactorily to demonstrate a capacity to adhere to all applicable Exchange, Commission, Clearing Corporation, and Federal Reserve Board policies, rules, and regulations, including those concerning record-keeping, reporting, finance, and trading procedures; or

(3) for such other cause as the Exchange reasonably may decide.

(d) The Exchange may determine not to permit a Member or a person associated with a Member to continue in Membership or association with a Member or may condition such continuance as a Member if the Member:

(1) fails to meet any of the qualification requirements for Membership or association after the Membership or association has been approved;

(2) fails to meet any condition placed by the Exchange on such Membership or association; or

(3) violates any agreement with the Exchange.

(e) Any decision made by the Exchange pursuant to paragraphs (a), (b) or (c) this Rule must be consistent with both the provisions of this Rule and the provisions of the Exchange Act.

(f) Any Applicant who has been denied Membership or association with a Member or granted only conditional Membership or association pursuant to paragraph (a), (b) or (c) of this Rule, and any Member or person associated with a Member who is not permitted to continue in Membership or association or whose continuance in Membership or association is conditioned pursuant to paragraph (d) of this Rule, may appeal the Exchange's decision under Chapter XI (Hearings, Review and Arbitration). No determination of the Exchange to discontinue or condition a person's Membership or association with a Member pursuant to paragraph (d) of this Rule shall take effect until the review procedures under Chapter XI (Hearings, Review and Arbitration) have been exhausted or the time for review has expired.

(g) Without prior Commission approval, the Exchange or any entity with which it is affiliated shall not directly or indirectly through one or more intermediaries acquire or maintain an ownership interest in an Exchange Member. In addition, without prior Commission approval, no Member shall be or become affiliated with (1) the Exchange; or (2) any affiliate of the Exchange. Nothing herein shall prohibit a Member from acquiring or holding an equity interest in (i) Miami International Holdings, Inc. that is permitted by the Certificate of Incorporation of Miami International Holdings, Inc. or (ii) MIAX PEARL that is permitted by the Amended and Restated Limited Liability Company Agreement of MIAX PEARL.

(h) Nothing in this Rule shall prohibit any Member from being or becoming an affiliate of the Exchange, or any facility of the Exchange, or an affiliate of any affiliate of the Exchange or any facility of the Exchange solely by reason of any officer, director or partner of such Member being or becoming a Director or Advisory Board member of Miami International Holdings, Inc. or MIAX PEARL.

[Adopted: December 13, 2016]

Rule 202. Persons Associated with Member

(a) Persons associated with Members shall be bound by the By-Laws and Rules of the Exchange and of the Clearing Corporation. The Exchange may bar a person from becoming or continuing to be associated with a Member if such person does not agree in writing, in a manner and form prescribed by the Exchange, to furnish the Exchange with information with respect to such person's relationship and dealings with the Member, and information reasonably related to such person's other securities business, as may be required by the Exchange, and to permit the examination of its books and records by the Exchange to verify the accuracy of any information so supplied.

(b) Each associated person of a Member that is required to be disclosed on Exchange Act Form BD as a direct owner or executive officer is required to submit to the Exchange pursuant to Rule 200 an application for approval to become associated with the Member in that capacity. No person may become associated with a Member in the capacity of a direct owner or executive that is required to be disclosed on Form BD unless and until the Exchange approves the association.

(c) A claim of any associated person required to be approved by the Exchange pursuant to paragraph (b) of this Rule against the Member with which that person is associated shall be subordinate in right of payment to customers and other Members.

[Adopted: December 13, 2016]

Rule 203. Qualification and Registration of Members and Associated Persons

(a) **Registration of Members and Associated Persons Engaged in the Securities Business.** Members that are individuals and associated persons of Members engaged or to be engaged in the securities business of a Member shall be registered with the Exchange in the category of registration appropriate to the function to be performed in a form and manner prescribed by the Exchange. Before the registration can become effective, the individual Member or individual associated person shall submit the appropriate application for registration, pass the Securities Industry Essentials Examination ("SIE"), pass a qualification examination appropriate to the category of registration in a form and manner prescribed by the Exchange and submit any required registration and examination fees. A Member shall not maintain a registration with the Exchange for any person: (1) who is no longer active in the Member's securities business; (2) who is no longer functioning in the registered capacity; or (3) where the sole purpose is to avoid an examination requirement. A Member shall not make application for the registration of any person where there is no intent to employ that person in the Member's securities business. A Member may, however, maintain or make application for the registration of an individual who performs legal, compliance, internal audit, back-office operations, or similar responsibilities for the Member, or a person who performs administrative support functions for registered personnel, or a person engaged in the securities business of a foreign securities affiliate or subsidiary of the Member.

(b) **Persons Exempt from Registration.** The following individual Members and individual associated persons of Members are exempt from the registration requirements set forth in paragraph (a):

(1) individual associated persons whose functions are solely and exclusively clerical or ministerial;

(2) individual Members and individual associated persons who are not actively engaged in the securities business;

(3) individual associated persons whose functions are related solely and exclusively to the Member's need for nominal corporate officers or for capital participation; or

(4) Individual associated persons whose functions are related solely and exclusively to:

(i) transactions in commodities;

(ii) transactions in security futures; and/or

(iii) effecting transactions on the floor of another national securities exchange and who are registered as floor members with such exchange.

(c) **Securities Trader Principal.**

(1) Members that are individuals and associated persons of Members included within the definition of Options Principal in Rule 100 and who will have supervisory responsibility over the securities trading activities described in Rule 203(d) shall become qualified and registered as a Securities Trader Principal. To qualify for registration as a Securities Trader Principal, such person shall become qualified and registered as a Securities Trader under Rule 1302(e) and pass the SIE and the General Securities Principal qualification examination (Series 24). A person who is qualified and registered as a Securities Trader Principal under this subparagraph (1) may only have supervisory responsibility over the activities specified in Rule 203(d), unless such person is separately qualified and

registered in another appropriate principal registration category, such as the General Securities Principal registration category.

(2) A person who is registered as a General Securities Principal shall not be qualified to supervise the trading activities described in Rule 203(d), unless such person has also become qualified and registered as a Securities Trader under Rule 1302(e) and become registered as a Securities Trader Principal.

(d) **Securities Trader.**

(1) Members that are individuals and associated persons of Members must register with the Exchange as a Securities Trader if, with respect to transactions in equity, preferred or convertible debt securities, or foreign currency options on the Exchange, such person is engaged in proprietary trading, the execution of transactions on an agency basis, or the direct supervision of such activities, other than any person associated with a Member whose trading activities are conducted principally on behalf of an investment company that is registered with the Commission pursuant to the Investment Company Act of 1940 and that controls, is controlled by or is under common control, with the Member.

(2) Before registration as a Securities Trader as defined in subparagraph (1) hereof may become effective, an applicant must become qualified as a Securities Trader under Rule 1302(e).

(3) A person registered as a Securities Trader shall not be qualified to function in any other registration category, unless he or she is also qualified and registered in such other registration category.

(e) **Financial/Operations Principal.** Each Member subject to Exchange Act Rule 15c3-1 shall designate a Financial/Operations Principal. The duties of a Financial/Operations Principal shall include taking appropriate actions to assure that the Member complies with applicable financial and operational requirements under the Rules and the Exchange Act, including but not limited to those requirements relating to the submission of financial reports and the maintenance of books and records. Each Financial/Operations Principal is required to have successfully completed the Financial and Operations Principal Examination (Series 27). Each Financial/Operations Principal designated by a Member shall be registered in that capacity with the Exchange in a form and manner prescribed by the Exchange. A Financial/Operations Principal of a Member may be a full-time employee, a part-time employee or independent contractor of the Member.

(f) **Chief Compliance Officer.** Each Member and Member organization that is a registered broker-dealer shall designate a Chief Compliance Officer on Schedule A of Form BD. An individual designated as a Chief Compliance Officer is required to register with the Exchange and pass the appropriate heightened qualification examination(s) as prescribed by the Exchange. A person who has been designated as a Chief Compliance Officer on Schedule A of Form BD for at least two years immediately prior to January 1, 2002, and who has not been subject within the last ten years to

(1) any statutory disqualification as defined in Section 3(a)(39) of the Exchange Act;

(2) a suspension;

(3) the imposition of a fine of $5,000 or more for a violation of any provision of any securities law or regulation or any agreement with, rule or standard of conduct of any securities governmental agency, or securities self-regulatory organization; or

(4) the imposition of a fine of $5,000 or more by any such regulatory or self-regulatory organization in connection with a disciplinary proceeding;

shall be required to register in this heightened category of registration as prescribed by the Exchange, but shall be exempt from the requirement to pass the heightened qualification examination as prescribed by the Exchange.

(g) **Registration Required Under Chapter XIII.** Individual associated persons of a Member Organization that conducts a public customer business must also comply with the registration requirements set forth in Chapter XIII. These additional registration categories include: (1) Registered Options Principal; and (2) Registered Representative.

(h) **Requirement for Examination on Lapse of Registration.** Any person whose registration has been revoked by the Exchange as a disciplinary sanction or whose most recent registration has been terminated for two or more years immediately preceding the date of receipt by the Exchange of a new application shall be required to pass a qualification examination appropriate to the category of registration as prescribed by the Exchange.

Any person who last passed the SIE or who was last registered as a Representative, whichever occurred last, four or more years immediately preceding the date of receipt by the Exchange of a new application for registration as a Representative shall be required to pass the SIE in addition to a representative qualification examination appropriate to his or her category of registration.

Interpretations and Policies:

.01 Each individual required to be registered under this Rule shall electronically file a Uniform Application for Securities Industry Registration ("Form U-4") through the Central Registration Depository system operated by FINRA ("Web CRD").

.02 Each individual required to be registered under this Rule shall, electronically submit to Web CRD any required amendments to Form U-4.

.03 Any Member or Member organization that discharges or terminates the employment or retention of an individual required to be registered under this Rule shall comply with the termination filing requirements set forth in Rules 1303(a) and 1303(b).

.04 Each individual required to be registered under this Rule is required to satisfy the continuing education requirements set forth in Rule 1304 as applicable and any other continuing education requirements as prescribed by the Exchange.

.05 The Exchange may, in exceptional cases and where good cause is shown, waive the applicable qualification examination and accept other standards as evidence of an applicant's qualifications for registration. Advanced age or physical infirmity will not individually of themselves constitute sufficient grounds to waive a qualification examination. Experience in fields ancillary to the securities business may constitute sufficient grounds to waive a qualification examination.

.06 For purposes of paragraph (a)(1) above, the Exchange shall consider an individual Member or an individual associated person to be engaged in the securities business of a Member or Member organization if:

(a) the individual Member or individual associated person engages in one or more of the following activities in the capacity of a Member or on behalf of the associated Member or Member organization:

(1) proprietary trading;

(2) market-making;

(3) effecting transactions on behalf of a broker-dealer;

(4) supervision or monitoring of proprietary trading, market making, or brokerage activities;

(5) supervision or training of those engaged in proprietary trading, market making or brokerage activities with respect to those activities; or

(b) the individual Member or individual associated Member engages in the management of one or more of the activities enumerated in subparagraphs (1) through (5) above as an officer, partner or a director.

.07 Each Member and Member organization must register with the Exchange in a heightened capacity each individual acting in any of the following capacities:

(a) officer;

(b) partner;

(c) director;

(d) supervisor of proprietary trading, market making or brokerage activities; and/or

(e) supervisor of those engaged in proprietary trading, market making or brokerage activities with respect to those activities.

Each Member or Member organization must register with the Exchange at least two individuals acting in one or more of the capacities described in (a) through (e) above. The Exchange may waive this requirement if a Member or Member organization demonstrates conclusively that only one individual acting in one or more of the heightened capacities described in (a) through (e) above should be required to register. A Member or Member organization that conducts proprietary trading only and has 25 or fewer registered persons may be required to have one officer or partner who is registered in this capacity.

.08 For purposes of these Interpretation and Policies to Rule 203, a Member or Member organization shall be considered to conduct only proprietary trading if the Member or Member organization has the following characteristics:

(a) The Member or Member organization is not required by Section 15(b)(8) of the Exchange Act to become a FINRA member but is a member of another registered securities exchange not registered solely under Section 6(g) of the Exchange Act;

(b) All funds used or proposed to be used by the Member or Member organization are the Member's or Member organization's own capital, traded through the Member's or Member organization's own accounts;

(c) The Member or Member organization does not, and will not, have customers; and

(d) All persons registered on behalf of the Member or Member organization acting in the capacity of a trader must be owners of, employees of, or contractors of the Member or Member organization.

.09 **Summary of Qualification Requirements.** The following summarizes the qualification requirements for each of the required registration categories described in these Rules:

Category of Registration	**Qualification Beginning October 1, 2018**
General Securities Principal (GP)	Registration and qualification as a General Securities Representative and pass the General Securities Principal qualification examination (Series 24)
Compliance Official (CO)	Pass the Compliance Official Exam (Series 14)
Financial/Operations Principal (FN)	Pass the Financial and Operations Principal qualification examination (Series 27)
Securities Trader Principal (TP)	Registration and qualification as a Securities Trader and pass the General Securities Principal qualification examination (Series 24)

Category of Registration	Qualification Beginning October 1, 2018
Registered Options Principal (OP)	Registration and qualification as a General Securities Representative and pass the Registered Options Principal qualification examination (Series 4)
General Securities Sales Supervisor (SU)	Registration and qualification as a General Securities Representative and pass the General Securities Sales Supervisor qualification examinations (Series 9 and Series 10)
General Securities Representative (GS)	Pass the SIE and the General Securities Representative qualification examination (Series 7)
Securities Trader (TD)	Pass the SIE and the Securities Trader qualification examination (Series 57)
Securities Trader Compliance Officer (CT)	Registration and qualification as a Securities Trader and pass the Compliance Official qualification exam (Series 14)

[Adopted: December 13, 2016; amended September 27, 2018 (SR-PEARL-2018-20)]

Rule 204. Members and Persons Associated with a Member Who Are or Become Subject to a Statutory Disqualification

(a) The Exchange may determine in accordance with the provisions of this Rule not to allow a Member or associated person of a Member to continue being a Member or associated with a Member, or to condition such continuance as a Member or associated person, if the Member or associated person is or becomes subject to a statutory disqualification under the Exchange Act.

(b) If a Member or associated person of a Member who is or becomes subject to a statutory disqualification under the Exchange Act wants to continue being a Member or associated with a Member, the Member or associated person must, within 30 days of becoming subject to a statutory disqualification, submit an application to the Exchange, in a form and manner prescribed by the Exchange, seeking to continue being a Member or associated with a Member notwithstanding the statutory disqualification. The application shall be accompanied by copies of all documents that are contained in the record of the underlying proceeding that triggered the statutory disqualification. Failure to timely file such an application is a factor that may be taken into consideration by the Exchange in making determinations pursuant to paragraph (c) of this Rule.

(c) Following the receipt of an application submitted pursuant to paragraph (b) of this Rule, or in the event the Exchange becomes aware that a Member or associated person of a Member is subject to a statutory disqualification and has failed to submit an application pursuant to paragraph (b) of this Rule within the required time period, the Exchange shall appoint a panel to conduct a hearing concerning the matter pursuant to the procedure set forth in Chapter XI (Hearings, Review and Arbitration).

(d) Subject to Chapter IX (Summary Suspension) of the Rules, any applicant whose application to become a Member is denied or conditioned, or any person whose association with a Member is denied or conditioned pursuant to paragraph (a), (b) or (c) of Rule 201, and any Member or person associated with a Member who is not permitted pursuant to this Rule to continue as a Member or to be associated with a Member or which continuance as a Member or association is conditioned, may appeal the Exchange's decision under Chapter XI (Hearings, Review and Arbitration) of the Rules.

(e) No determination to discontinue or condition a person as a Member or associated person pursuant to this Rule shall take effect until the review procedures under paragraph (d) of this Rule have been exhausted or the time for review has expired.

Interpretations and Policies:

.01 The Exchange may waive the provisions of this Rule when a proceeding is pending before another self-regulatory organization to determine whether to permit a Member or an associated person of a Member to continue being a Member or associated with the Member notwithstanding a statutory disqualification. In the event the Exchange determines to waive the provisions of this Rule with respect to a Member or associated person, the Exchange shall determine whether it will concur in any Exchange Act Rule 19h-1 filing made by another self-regulatory organization with respect to the Member or associated person.

.02 If a Member or an associated person of a Member is or becomes subject to a statutory disqualification under the Exchange Act, the Member shall immediately provide written notice to the Exchange of the name of the Member or associated person, the associated person's capacity with the Member, and the nature of the statutory disqualification.

.03 In those instances where Exchange Act Rule 19h-1(a)(2) does not require the Exchange to make a notice filing with the Commission to permit an associated person to continue in association with a Member, and where the Exchange intends to grant the associated person's application for continued association, the Exchange may waive the hearing provisions of paragraph (c) above with respect to that associated person.

[Adopted: December 13, 2016]

Rule 205. Dissolution and Liquidation of Members

Every Member shall promptly provide written notice to the Exchange of any adoption of a plan of liquidation or dissolution of the Member and of any actual liquidation or dissolution of the Member. Upon receipt of such a notice, the Member may be suspended in accordance with Chapter IX (Summary Suspension) of the Rules.

[Adopted: December 13, 2016]

Rule 206. Obligations of Terminating Members

Each terminating Member shall promptly (a) make any outstanding filings required under Exchange Rules, and (b) pay any outstanding fees, assessments, charges, fines, or other amounts due to the Exchange, the Commission, or the Securities Investor Protection Corporation. If a Member fails to make all such filings, or to pay all such dues, fees and charges, the Exchange may, notwithstanding the other applicable provisions of this Chapter, delay the effectiveness of the termination until such failures have been remedied.

[Adopted: December 13, 2016]

Rule 207. Responsible Person

Each Member must designate an individual as the Responsible Person (as defined in Rule 100) for the Member. The Responsible Person must be affiliated with the Member.

[Adopted: December 13, 2016]

Rule 208. MIAX PEARL Billing System

Every Member must designate a Clearing Member for the payment of the Member's Exchange invoices and vendor invoices for Exchange-related services assessed by the Exchange by means of the Exchange's MIAX PEARL Billing System ("PBS"). The designated Clearing Member shall pay to the Exchange on a timely basis the full amount of each monthly Exchange invoice. Such payments shall be drafted by the Exchange against the designated Clearing Member's account at the Clearing Corporation.

[Adopted: December 13, 2016]

Rule 209. Letter of Guarantee

Each Member shall provide a letter of guarantee for the Member's trading activities on the Exchange from a Clearing Member in a form and manner prescribed by the Exchange.

[Adopted: December 13, 2016]

Rule 210. Sponsored Access to the Exchange

(a) **General**. This Rule governs electronic access for the entry and execution of orders by Sponsored Users with authorized access to the System and the applicable requirements that Sponsored Users and Sponsoring Members are required to satisfy in order to engage in a Sponsoring Member/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 Member for purposes of receiving access to the System.

(b) **Sponsored User.** A Sponsored User may obtain and maintain authorized access to the System, only if such access is authorized in advance by one or more Sponsoring Members as follows:

(1) Sponsored Users must enter into a sponsorship arrangement with a "Sponsoring Member," which is defined as a Member that agrees to sponsor the Sponsored User's access to the System. The sponsorship arrangement consists of three separate components:

(i) The Sponsored User must enter into and maintain a customer agreement(s) with its Sponsoring Member(s), establishing a proper relationship(s) and account(s) through which the Sponsored User will be permitted to trade on the System.

(ii) For a Sponsored User to obtain and maintain authorized access to the System, the Sponsored User and its Sponsoring Member must enter into a written agreement that incorporates the following sponsorship provisions:

(A) The Sponsored User and its Sponsoring Member must have entered into and maintained a Sponsored User Agreement with the Exchange.

(B) The Sponsoring Member acknowledges and agrees that:

1. 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 Member; and

2. the Sponsoring Member 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 Member agrees that it will be bound by and comply with the Exchange's By-Laws, Rules and procedures, as well as any other equivalent documents pertaining to the System (collectively, 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 Member.

(D) Both the Sponsoring Member and the Sponsored User will agree to comply with all applicable federal securities laws, rules and regulations in connection with the Sponsoring Member/Sponsored User relationship.

(E) The Sponsored User agrees that it will maintain, keep current and provide to the Sponsoring Member a list of persons who have been granted access to the System on behalf of the Sponsored User ("Authorized Traders").

(F) 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 System.

(G) The Sponsored User agrees that it will not permit anyone other than Authorized Traders to use or obtain access to the System.

(H) The Sponsored User agrees that it will take reasonable security precautions to prevent unauthorized use of or access to the System, including unauthorized entry of information into the System, or the information and data made available therein. 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 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.

(I) The Sponsored User acknowledges its responsibility for establishing adequate procedures and controls that permit it to effectively monitor use of and access to the System by any person acting on behalf of or in the name of Sponsored User for compliance with the terms of these sponsorship provisions.

(J) The Sponsored User agrees that it will pay when due all amounts, if any, payable to the Sponsoring Member, the Exchange or any other third parties that arise from the Sponsored User's use of or access to the System. Such amounts include, but are not limited to, applicable Exchange and regulatory fees.

(iii) The Sponsored User and Sponsoring Member must provide the Exchange with a Sponsored User Agreement acknowledging and agreeing to the requirements of this Rule, including an acknowledgement by the Sponsoring Member of its responsibility for the orders, executions and actions of its Sponsored User. To the extent the Sponsoring Member is not a clearing firm, the Sponsoring Member's clearing firm, which must be a Member, 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 Member/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 Exchange. If such a written notice of revocation has not been filed with the Exchange 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 Member or, if applicable, the Sponsored Member's clearing firm of responsibility for transactions guaranteed prior to the effective date of the revocation.

(c) **Sponsoring Member.**

(1) Each Sponsoring Member must have an effective process for vetting and approving persons who may obtain access to the System on behalf of its Sponsored Users (*i.e.*, Authorized Traders);

(2) Each Sponsoring Member must maintain an up-to-date list of Authorized Traders and must provide that list to the Exchange upon request; and

(3) Each Sponsoring Member 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 System, to prevent the unauthorized use or access to the Exchange or the System, including the unauthorized entry of information into the Exchange or the System, or the information and data made available therein; and (ii) otherwise comply with the Exchange Rules and all applicable federal securities laws, rules and regulations.

(d) If the Exchange determines that a Sponsored User or an Authorized Trader has caused a Sponsoring Member to violate the Exchange Rules or Exchange Act Rule 15c3-5, the Exchange may direct the Sponsoring Member 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 Member must suspend or withdraw such status.

[Adopted: December 13, 2016]

CHAPTER III. BUSINESS CONDUCT

The rules contained in MIAX Chapter III, as such rules may be in effect from time to time (the "Chapter III Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter III, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter III Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter III Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in the Chapter III Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter III Rules shall be read to refer to the MIAX PEARL Rule; the defined term "Chapter" in the Chapter III Rules shall be read to refer to the MIAX PEARL Chapter; the defined term "Market Maker" in Chapter III Rules shall be read to refer to the MIAX PEARL Market Maker; and the defined term "Member" in the Chapter III Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended June 14, 2017 (SR-MIAX-2017-21); amended June 20, 2017 (SR-MIAX-2017-30); amended September 27, 2017 (SR-MIAX-2017-39); amended March 8, 2018 (SR-MIAX-2018-10); amended June 25, 2018 (SR-MIAX-2018-11); amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER IV. OPTION CONTRACTS TRADED ON THE EXCHANGE

Rule 400. Designation of Securities

The Exchange trades option contracts, each of which is designated by reference to the issuer of the underlying security, expiration month or expiration date, exercise price and type (put or call).

[Adopted: December 13, 2016]

Rule 401. Rights and Obligations of Holders and Writers

The rights and obligations of holders and writers shall be set forth in the Rules of the Clearing Corporation.

[Adopted: December 13, 2016]

Rule 402. Criteria for Underlying Securities

(a) Underlying securities with respect to which put or call option contracts are approved for listing and trading on the Exchange must meet the following criteria:

(1) the security must be registered and be an "NMS stock" as defined in Rule 600 of Regulation NMS under the Exchange Act.

(2) the security shall be characterized by a substantial number of outstanding shares that are widely held and actively traded.

(b) In addition, the Exchange shall from time to time establish guidelines to be considered in evaluating potential underlying securities for Exchange options transactions. There are many relevant factors which must be considered in arriving at such a determination, and the fact that a particular security may meet the guidelines established by the Exchange does not necessarily mean that it will be selected as an underlying security. Further, in exceptional circumstances an underlying security may be selected by the Exchange even though it does not meet all of the guidelines. The Exchange may also give consideration to maintaining diversity among various industries and issuers in selecting underlying securities. Notwithstanding the forgoing, however, absent exceptional circumstances, an underlying security will not be selected unless:

(1) There are a minimum of seven (7) million shares of the underlying security which are owned by persons other than those required to report their stock holdings under Section 16(a) of the Exchange Act.

(2) There are a minimum of 2,000 holders of the underlying security.

(3) The issuer is in compliance with any applicable requirements of the Exchange Act.

(4) Trading volume (in all markets in which the underlying security is traded) has been at least 2,400,000 shares in the preceding twelve (12) months.

(5) Either:

(i) If the underlying security is a "covered security" as defined under Section 18(b)(1)(A) of the Securities Act of 1933 (the "Securities Act"), the market price per share of the underlying security has been at least $3.00 for the previous three (3) consecutive business days preceding the date on which the Exchange submits a certificate to the Clearing Corporation for listing and trading, as measured by the closing price reported in the primary market in which the underlying security is traded; or

(ii) If the underlying security is not a "covered security," the market price per share of the underlying security has been at least $7.50 for the majority of business days during the three (3) calendar months preceding the date of selection, as measured by the lowest closing price reported in any market in which the underlying security traded on each of the subject days.

(6) Notwithstanding the requirements set forth in paragraphs (1), (2), (4) and (5) above, the Exchange may list and trade an option contract if:

(i) the underlying security meets the guidelines for continued approval in Rule 403.

(ii) options on such underlying security are traded on at least one other registered national securities exchange.

(c) **Securities of Restructured Companies.**

(1) **Definitions**. The following definitions shall apply to the provisions of this paragraph (c):

(i) "Restructuring Transaction" refers to a spin-off, reorganization, recapitalization, restructuring or similar corporate transaction.

(ii) "Restructure Security" refers to an equity security that a company issues, or anticipates issuing, as the result of a Restructuring Transaction of the company.

(iii) "Original Equity Security" refers to a company's equity security that is issued and outstanding prior to the effective date of a Restructuring Transaction of the company.

(iv) "Relevant Percentage" refers to either:

(A) twenty-five percent (25%), when the applicable measure determined with respect to the Original Equity Security or the business it represents includes the business represented by the Restructure Security; or

(B) thirty-three and one-third percent (33-1/3%), when the applicable measure determined with respect to the Original Equity Security or the business it represents excludes the business represented by the Restructure Security.

(2) **"Share" and "Number of Shareholder" Guidelines**. In determining whether a Restructure Security satisfies the share guideline set forth in Rule 402(b)(1) (the "Share Guideline") or the number of holders guideline set forth in Rule 402(b)(2) (the "Number of Shareholders Guideline"), the Exchange may rely upon the facts and circumstances that it expects to exist on the option's intended listing date, rather than on the date on which the Exchange selects for options trading the underlying Restructure Security.

(i) The Exchange may assume that:

(A) both the "Share" and "Number of Shareholders" Guidelines are satisfied if, on the option's intended listing date, the Exchange expects no fewer than forty (40) million shares of the Restructure Security to be issued and outstanding.

(B) either such Guideline is satisfied if, on the option's intended listing day, the Exchange expects the Restructure Security to be listed on an exchange or automatic quotation system that has, and is subject to, an initial listing requirement that is no less stringent than the Guideline in question.

(ii) The Exchange may not rely on any such assumption, however, if a reasonable Exchange investigation or that of another exchange demonstrates that either the Share Guideline or Number of Shareholders Guideline will not in fact be satisfied on an option's intended listing date.

(iii) In addition, in the case of a Restructuring Transaction in which the shares of a Restructure Security are issued or distributed to the holders of shares of an Original Equity Security, the Exchange may determine that either the Share Guideline or the Number of Shareholders Guideline is satisfied based upon the Exchange's knowledge of the outstanding shares or number of shareholders of the Original Equity Security.

(3) **"Trading Volume" Guideline**. In determining whether a Restructure Security that is issued or distributed to the holders of shares of an Original Equity Security (but not a Restructure Security that is issued pursuant to a public offering or rights distribution) satisfies the trading volume guideline set forth in Rule 402(b)(4) (the "Trading Volume Guideline"), the Exchange may consider the trading volume history of the Original Equity Security prior to the "ex-date" of the Restructuring Transaction if the Restructure Security satisfies the "Substantiality Test" set forth in subparagraph (c)(5) below.

(4) **"Market Price" Guideline**. In determining whether a Restructure Security satisfies the market price history guideline set forth in Rule 402(b)(5) (the "Market Price Guideline"), the Exchange may consider the market price history of the Original Equity Security prior to the "ex-date" of the Restructuring Transaction if:

(i) the Restructure Security satisfies the "Substantiality Test" set forth in subparagraph (c)(5) below.

(ii) in the case of the application of the Market Price Guideline to a Restructure Security that is distributed pursuant to a public offering or a rights distribution:

(A) the Restructure Security trades "regular way" on an exchange or automatic quotation system for at least the five (5) trading days immediately preceding the date of selection; and

(B) at the close of trading on each trading day on which the Restructure Security trades "regular way" prior to the date of selection, and the opening of trading on the date of selection, the market price of the Restructure Security was at least $7.50, or, if the Restructure Security is a "covered security," as defined in Rule 402(b)(5)(i), the market price of the Restructure Security was at least $3.00.

(5) **The "Substantiality Test"**. A Restructure Security satisfies the "Substantiality Test" if:

(i) the Restructure Security has an aggregate market value of at least $500 million; or

(ii) at least one of the following conditions is met:

(A) the aggregate market value of the Restructure Security equals or exceeds the Relevant Percentage of the aggregate market value of the Original Equity Security;

(B) the aggregate book value of the assets attributed to the business represented by the Restructure Security equals or exceeds both $50 million and the Relevant Percentage of the aggregate book value of the assets attributed to the business represented by the Original Equity Security; or

(C) the revenues attributed to the business represented by the Restructure Security equals or exceeds both $50 million and the Relevant Percentage of the revenues attributed to the business represented by the Original Equity Security.

(6) A Restructure Security's aggregate market value may be determined from "when issued" prices, if available.

(7) In calculating comparative aggregate market values for the purpose of assessing whether a Restructure Security qualifies to underlie an option, the Exchange shall use the Restructure Security's closing price on its primary market on the last business day prior to the selection date or the Restructure Security's opening price on its primary market on the selection date and shall use the corresponding closing or opening price of the related Original Equity Security.

(8) In calculating comparative asset values and revenues, the Exchange shall use (i) the issuer's latest annual financial statements or (ii) the issuer's most recently available interim financial statements (so long as such interim financial statements cover a period of not less than three months), whichever are more recent. Those financial statements may be audited or unaudited and may be pro forma.

(9) Except in the case of a Restructure Security that is distributed pursuant to a public offering or rights distribution, the Exchange may not rely upon the trading volume or market price history of an Original Equity Security as this paragraph (c) permits for any trading day unless it relies upon both of those measures for that trading day.

(10) Once the Exchange commences to rely upon a Restructure Security's trading volume and market price history for any trading day, the Exchange may not rely upon the trading volume and market price history of the security's related Original Equity Security for any trading day thereafter.

(11) **"When Issued" Trading Prohibited**. The Exchange shall not list for trading option contracts that overlie a Restructure Security that is not yet issued and outstanding, regardless of whether the Restructure Security is trading on a "when issued" basis or on another basis that is contingent upon the issuance or distribution of shares.

(d) In considering underlying securities, the Exchange shall ordinarily rely on information made publicly available by the issuer and/or the markets in which the security is traded.

(e) The word "security" shall be broadly interpreted to mean any equity security, as defined in Rule 3a11-1 under the Exchange Act, which is appropriate for options trading, and the word "shares" shall mean the unit of trading of such security.

(f) Securities deemed appropriate for options trading shall include nonconvertible preferred stock issues and American Depositary Receipts ("ADRs") if they meet the criteria and guidelines set forth in this Rule 402 and if, in the case of ADRs:

(1) the Exchange has in place an effective surveillance sharing agreement with the primary exchange in the home country where the security underlying the ADR is traded; or

(2) the combined trading volume of the ADR and other related ADRs and securities (as defined below) occurring in the U.S. ADR market or in markets with which the Exchange has in place an effective surveillance sharing agreement represents (on a share equivalent basis) at least fifty percent (50%) of the combined worldwide trading volume in the ADR, the security underlying the ADR, other classes of common stock related to the underlying security, and ADRs overlying such other stock (together "other related ADRs and securities") over the three month period preceding the date of selection of the ADR for options trading; or

(3) (i) the combined trading volume of the ADR and other related ADRs and securities occurring in the U.S. ADR market and in markets where the Exchange has in place an effective surveillance sharing agreement, represents (on a share equivalent basis) at least twenty percent (20%) of the combined worldwide trading volume in the ADR and in other related ADRs and securities over the three month period preceding the date of selection of the ADR for options trading, (ii) the average daily trading volume for the security in the U.S. markets over the three (3) months preceding the selection of the ADR for options trading is 100,000 or more shares, and (iii) the trading volume is at least 60,000 shares per day in U.S. markets on a majority of the trading days for the three (3) months preceding the date of selection of the ADR for options trading ("Daily Trading Volume Standard"); or

(4) the SEC otherwise authorizes the listing.

(g) Securities deemed appropriate for options trading shall include shares issued by registered closed-end management investment companies that invest in the securities of issuers based in one or more foreign countries ("International Funds") if they meet the criteria and guidelines set forth in this Rule 402 and either:

(1) the Exchange has a market information sharing agreement with the primary home exchange for each of the securities held by the fund, or

(2) the International Fund is classified as a diversified company as that term is defined by section 5(b) of the Investment Company Act of 1940, as amended, and the securities held by the fund are issued by issuers based in five or more countries.

(h) A "market information sharing agreement" for purposes of this Rule is an agreement that would permit the Exchange to obtain trading information relating to the securities held by the fund including the identity of the member of the foreign exchange executing a trade. International Fund shares not meeting criteria of paragraph (i) shall be deemed appropriate for options trading if the SEC specifically authorizes the listing.

(i) Securities deemed appropriate for options trading shall include shares or other securities ("Exchange-Traded Fund Shares") that are traded on a national securities exchange and are defined as an "NMS stock" under Rule 600 of Regulation NMS, and that:

(A) represent interests in registered investment companies (or series thereof) organized as open-end management investment companies, unit investment trusts or similar entities that hold portfolios of securities and/or financial instruments ("Funds"), including, but not limited to, stock index futures contracts, options on futures, options on securities and indices, equity caps, collars and floors, swap agreements, forward contracts, repurchase agreements and reverse repurchase agreements (the "Financial Instruments"), and money market instruments, including, but not limited to, U.S. government securities and repurchase agreements (the "Money Market Instruments") comprising or otherwise based on or representing investments in broad-based indexes or portfolios of securities and/or Financial Instruments and Money Market Instruments (or that hold securities in one or more other registered investment companies that themselves hold such portfolios of securities and/or Financial Instruments and Money Market Instruments); or

(B) represent interests in a trust or similar entity that holds a specified non-U.S. currency or currencies deposited with the trust which when aggregated in some specified minimum number may be surrendered to the trust or similar entity by the beneficial owner to receive the specified non-U.S. currency or currencies and pays the beneficial owner interest and other distributions on the deposited non-U.S. currency or currencies, if any, declared and paid by the trust ("Currency Trust Shares"); or

(C) represent commodity pool interests principally engaged, directly or indirectly, in holding and/or managing portfolios or baskets of securities, commodity futures contracts, options on commodity futures contracts, swaps, forward contracts and/or options on physical commodities and/or non-U.S. currency ("Commodity Pool ETFs"); or

(D) are issued by the SPDR® Gold Trust or the iShares COMEX Gold Trust or the iShares Silver Trust or the ETFS Silver Trust or the ETFS Gold Trust or the ETFS Palladium Trust or the ETFS Platinum Trust or the Sprott Physical Gold Trust; or

(E) represent an interest in a registered investment company ("Investment Company") organized as an open-end management company or similar entity, that invests in a portfolio of securities selected by the Investment Company's investment adviser consistent with the Investment Company's investment objectives and policies, which is issued in a specified aggregate minimum number in return for a deposit of a specified portfolio of securities and/or a cash amount with a value equal to the next determined net asset value ("NAV"), and when aggregated in the same specified minimum number, may be redeemed at a holder's request, which holder will be paid a specified portfolio

of securities and/or cash with a value equal to the next determined NAV ("Managed Fund Share"); provided that all of the following conditions are met:

(1) the Exchange-Traded Fund Shares either:

(i) meet the criteria and guidelines set forth in paragraphs (a) and (b) above; or

(ii) the Exchange-Traded Fund Shares are available for creation or redemption each business day from or through the issuing trust, investment company, commodity pool or other entity in cash or in kind at a price related to net asset value, and the issuer is obligated to issue Exchange-Traded Fund Shares in a specified aggregate number even if some or all of the investment assets and/or cash required to be deposited have not been received by the issuer, subject to the condition that the person obligated to deposit the investment assets has undertaken to deliver them as soon as possible and such undertaking is secured by the delivery and maintenance of collateral consisting of cash or cash equivalents satisfactory to the issuer of the Exchange-Traded Fund Shares, all as described in the Exchange-Traded Fund Shares' prospectus; and

(iii) For Commodity Pool ETFs that engage in holding and/or managing portfolios or baskets commodity futures contracts, options on commodity futures contracts, swaps, forward contracts, options on physical commodities, options on non-U.S. currency and/or securities, the Exchange has entered into a comprehensive surveillance sharing agreement with the marketplace or marketplaces with last sale reporting that represent(s) the highest volume in such commodity futures contracts and/or options on commodity futures contracts on the specified commodities or non-U.S. currency, which are utilized by the national securities exchange where the underlying Commodity Pool ETFs are listed and traded.

(2) the Exchange-Traded Fund Shares meet the following criteria:

(i) are listed pursuant to generic listing standards for series of portfolio depositary receipts and index fund shares based on international or global indexes under which a comprehensive surveillance agreement is not required; or

(ii) (A) any non-U.S. component securities of an index or portfolio of securities on which the Exchange-Traded Fund Shares are based that are not subject to comprehensive surveillance agreements do not in the aggregate represent more than 50% of the weight of the index or portfolio;

(B) component securities of an index or portfolio of securities on which the Exchange-Traded Fund Shares are based for which the primary market is in any one country that is not subject to a comprehensive surveillance agreement do not represent 20% or more of the weight of the index;

(C) component securities of an index or portfolio of securities on which the Exchange-Traded Fund Shares are based for which the primary market is in any two countries that are not subject to comprehensive surveillance agreements do not represent 33% or more of the weight of the index; and

(D) For Currency Trust Shares, the Exchange has entered into an appropriate comprehensive surveillance sharing agreement with the marketplace or marketplaces with last sale reporting that represent(s) the highest volume in derivatives (options or futures) on the specified non-U.S. currency or currencies, which are utilized by the national securities exchange where the underlying Currency Trust Shares are listed and traded.

(j) Securities deemed appropriate for options trading shall include shares or other securities ("Trust Issued Receipts") that are principally traded on a national securities exchange or through the facilities of a national securities association and reported as a national market security, and that represent ownership of the specific deposited securities held by a trust, provided:

(1) the Trust Issued Receipts (i) meet the criteria and guidelines for underlying securities set forth in paragraph (b) to this Rule; or (ii) must be available for issuance or cancellation each business day from the Trust in exchange for the underlying deposited securities; and

(2) not more than 20% of the weight of the Trust Issued Receipt is represented by ADRs on securities for which the primary market is not subject to a comprehensive surveillance agreement.

(k) (1) Securities deemed appropriate for options trading shall include shares or other securities ("Equity Index-Linked Securities," "Commodity-Linked Securities," "Currency-Linked Securities," "Fixed Income Index-Linked Securities," "Futures-Linked Securities," and "Multifactor Index-Linked Securities," collectively known as "Index-Linked Securities") that are principally traded on a national securities exchange and an "NMS Stock" (as defined in Rule 600 of Regulation NMS under the Securities Exchange Act of 1934), and represent ownership of a security that provides for the payment at maturity, as described below:

(i) Equity Index-Linked Securities are securities that provide for the payment at maturity of a cash amount based on the performance of an underlying index or indexes of equity securities ("Equity Reference Asset");

(ii) Commodity-Linked Securities are securities that provide for the payment at maturity of a cash amount based on the performance of one or more physical commodities or commodity futures, options on commodities, or other commodity derivatives or Commodity-Based Trust Shares or a basket or index of any of the foregoing ("Commodity Reference Asset");

(iii) Currency-Linked Securities are securities that provide for the payment at maturity of a cash amount based on the performance of one or more currencies, or options on currencies or currency futures or other currency derivatives or Currency Trust Shares (as defined in Rule 402(h)), or a basket or index of any of the foregoing ("Currency Reference Asset");

(iv) Fixed Income Index-Linked Securities are securities that provide for the payment at maturity of a cash amount based on the performance of one or more notes, bonds, debentures or evidence of indebtedness that include, but are not limited to, U.S. Department of Treasury securities ("Treasury Securities"), government-sponsored entity securities ("GSE Securities"), municipal securities, trust preferred securities, supranational debt and debt of a foreign country or a subdivision thereof or a basket or index of any of the foregoing ("Fixed Income Reference Asset");

(v) Futures-Linked Securities are securities that provide for the payment at maturity of a cash amount based on the performance of an index of (A) futures on Treasury Securities, GSE Securities, supranational debt and debt of a foreign country or a subdivision thereof, or options or other derivatives on any of the foregoing; (B) interest rate futures or options or derivatives on the foregoing in this subparagraph (B); or (C) CBOE Volatility Index (VIX) Futures ("Futures Reference Asset"); and

(vi) Multifactor Index-Linked Securities are securities that provide for the payment at maturity of a cash amount based on the performance or the leveraged (multiple or inverse) performance of any combination of two or more Equity Reference Assets, Commodity Reference Assets, Currency Reference Assets, Fixed Income Reference Assets, or Futures Reference Assets ("Multifactor Reference Asset");

(2) For purposes of this Rule 402(k), Equity Reference Assets, Commodity Reference Asset, Currency Reference Assets, Fixed Income Reference Assets, Futures Reference Assets together with Multifactor Reference Assets, collectively will be referred to as "Reference Assets."

(3) (i) The Index-Linked Securities must meet the criteria and guidelines for underlying securities set forth in Rule 402(b); or

(ii) the Index-Linked Securities must be redeemable at the option of the holder at least on a weekly basis through the issuer at a price related to the applicable underlying Reference Asset. In addition, the issuing

company is obligated to issue or repurchase the securities in aggregation units for cash, or cash equivalents, satisfactory to the issuer of Index-Linked Securities which underlie the option as described in the Index-Linked Securities prospectus.

(4) The Exchange will implement surveillance procedures for options on Index-Linked Securities, including adequate comprehensive surveillance sharing agreements with markets trading in non-U.S. components, as applicable.

[Adopted: December 13, 2016; amended February 22, 2018 (SR-PEARL-2018-04)]

Rule 403. Withdrawal of Approval of Underlying Securities

(a) Whenever the Exchange determines that an underlying security previously approved for Exchange options transactions does not meet the then current requirements for continuance of such approval or for any other reason should no longer be approved, the Exchange will not open for trading any additional series of options of the class covering that underlying security and may prohibit any opening purchase transactions in series of options of that class previously opened (except that opening transactions by Market Makers executed to accommodate closing transactions of other market participants may be permitted) to the extent it deems such action necessary or appropriate; provided, however, that where exceptional circumstances have caused an underlying security not to comply with the Exchange's current approval maintenance requirements regarding number of publicly held shares, number of shareholders, trading volume or market price, the Exchange may, in the interest of maintaining a fair and orderly market or for the protection of investors, determine to continue to open additional series of option contracts of the class covering that underlying security. When all option contracts with respect to any underlying security that is no longer approved have expired, the Exchange may make application to the SEC to strike from trading and listing all such option contracts.

(b) Absent exceptional circumstances, an underlying security will not be deemed to meet the Exchange's requirements for continued approval whenever any of the following occur:

(1) There are fewer than 6,300,000 shares of the underlying security held by persons other than those who are required to report their security holdings under Section 16(a) of the Exchange Act.

(2) There are fewer than 1,600 holders of the underlying security.

(3) The trading volume (in all markets in which the underlying security is traded) has been less than 1,800,000 shares in the preceding twelve (12) months.

(4) The underlying security ceases to be an "NMS stock" as defined in Rule 600 of Regulation NMS under the Exchange Act.

(5) If an underlying security is approved for options listing and trading under the provisions of Rule 402(c), the trading volume of the Original Equity Security (as therein defined) prior to but not after the commencement of trading in the Restructure Security (as therein defined), including "when-issued" trading, may be taken into account in determining whether the trading volume requirement of subparagraph (3) is satisfied.

(c) In considering whether any of the events specified in paragraph (b) of this Rule have occurred with respect to an underlying security, the Exchange shall ordinarily rely on information made publicly available by the issuer and/or the markets in which such security is traded.

(d) If prior to the delisting of a class of option contracts covering an underlying security that has been found not to meet the Exchange's requirements for continued approval, the Exchange determines that the underlying security again meets the Exchange's requirements, the Exchange may open for trading additional series of options of that class and may lift any restriction on opening purchase transactions imposed by this Rule.

(e) Whenever the Exchange announces that approval of an underlying security has been withdrawn for any reason or that the Exchange has been informed that the issuer of an underlying security has ceased to be in compliance with SEC reporting requirements, each Member shall, prior to effecting any transaction in option contracts with respect to such underlying security for a customer, inform such customer of such fact and of the fact that the Exchange may prohibit further transactions in such option contracts to the extent it shall deem such action necessary and appropriate.

(f) If an ADR was initially deemed appropriate for options trading on the grounds that fifty percent (50%) or more of the worldwide trading volume (on a share equivalent basis) in the ADR and other related ADRs and securities takes place in U.S. markets or in markets with which the Exchange has in place an effective surveillance sharing agreement, or if an ADR was initially deemed appropriate for options trading based on the daily trading volume standard Rule 402(f)(3), the Exchange may not open for trading additional series of options on the ADR unless:

(1) The percentage of worldwide trading volume in the ADR and other related securities that takes place in the U.S. and in markets with which the Exchange has in place effective surveillance sharing agreements for any consecutive three (3) month period is either:

(i) at least thirty percent (30%) without regard to the average daily trading volume in the ADR, or

(ii) at least fifteen percent (15%) when the average U.S. daily trading volume in the ADR for the previous three (3) months is at least 70,000 shares;

(2) the Exchange then has in place an effective surveillance sharing agreement with the primary exchange in the home country where the security underlying the ADR is traded; or

(3) the SEC has otherwise authorized the listing.

(g) Exchange-Traded Fund Shares approved for options trading pursuant to Rule 402(i) will not be deemed to meet the requirements for continued approval, and the Exchange shall not open for trading any additional series of option contracts of the class covering such Exchange-Traded Fund Shares if the Exchange-Traded Fund Shares are delisted from trading as provided in subparagraph (b)(4) of this Rule or the Exchange-Traded Fund Shares are halted or suspended from trading on their primary market. In addition, the Exchange shall consider the suspension of opening transactions in any series of options of the class covering Exchange-Traded Fund Shares in any of the following circumstances:

(1) In the case of options covering Exchange-Traded Fund Shares approved pursuant to Rule 402(i)(E)(1)(i), in accordance with the terms of subparagraphs (b)(1), (2) and (3) of this Rule 403;

(2) In the case of options covering Exchange-Traded Fund Shares approved pursuant to Rule 402(i)(E)(1)(ii), following the initial twelve-month period beginning upon the commencement of trading in the Exchange-Traded Fund Shares on a national securities exchange and are defined as an "NMS stock" under Rule 600 of Regulation NMS, there were fewer than 50 record and/or beneficial holders of such Exchange-Traded Fund Shares for 30 or more consecutive trading days;

(3) the value of the index or portfolio of securities or non-U.S. currency, portfolio of commodities including commodity futures contracts, options on commodity futures contracts, swaps, forward contracts, options on physical commodities and/or Financial Instruments and Money Market Instruments, on which the Exchange-Traded Fund Shares are based is no longer calculated or available; or

(4) such other event occurs or condition exists that in the opinion of the Exchange makes further dealing in such options on the Exchange inadvisable.

(h) Absent exceptional circumstances, securities initially approved for options trading pursuant to paragraph (j) of Rule 402 (such securities are defined and referred to in that paragraph as "Trust Issued Receipts") shall not be deemed to meet the Exchange's requirements for continued approval, and the Exchange shall not open for trading any

additional series of option contracts of the class covering such Trust Issued Receipts, whenever the Trust Issued Receipts are delisted and trading in the Receipts is suspended on a national securities exchange, or the Trust Issued Receipts are no longer traded as national market securities through the facilities of a national securities association. In addition, the Exchange shall consider the suspension of opening transactions in any series of options of the class covering Trust Issued Receipts in any of the following circumstances:

(1) in accordance with the terms of paragraph (b) this Rule 403 in the case of options covering Trust Issued Receipts when such options were approved pursuant to subparagraph (j)(1)(i) under Rule 402;

(2) upon annual review, the Trust has more than 60 days remaining until termination and there are fewer than 50 record and/or beneficial holders of Trust Issued Receipts for 30 or more consecutive trading days;

(3) the Trust has fewer than 50,000 receipts issued and outstanding;

(4) the market value of all receipts issued and outstanding is less than $1,000,000; or

(5) such other event shall occur or condition exist that in the opinion of the Exchange makes further dealing in such options on the Exchange inadvisable.

(i) For Holding Company Depositary Receipts (HOLDRs), the Exchange will not open additional series of options overlying HOLDRs (without prior SEC approval) if:

(1) the proportion of securities underlying standardized equity options to all securities held in a HOLDRs trust is less than 80% (as measured by their relative weightings in the HOLDRs trust); or

(2) less than 80% of the total number of securities held in a HOLDRs trust underlie standardized equity options.

Interpretations and Policies:

.01 If an option series is listed but restricted to closing transactions on another national securities exchange, the Exchange may list such series (even if such series would not otherwise be eligible for listing under the Exchange's Rules), which shall also be restricted to closing transactions on the Exchange.

.02 If an option class is open for trading on another national securities exchange, the Exchange may delist such option class immediately. If an option class is open for trading solely on the Exchange, the Exchange may determine to not open for trading any additional series in that option class; may restrict series with open interest to closing transactions, provided that, opening transactions by Market Makers executed to accommodate closing transactions of other market participants may be permitted; and may delist the option class when all series within that class have expired. In all instances, delisting shall be preceded by a notice to members concerning the delisting.

[Adopted: December 13, 2016; amended March 23, 2018 (SR-PEARL-2018-05)]

Rule 404. Series of Option Contracts Open for Trading

(a) After a particular class of options has been approved for listing and trading on the Exchange, the Exchange from time to time may open for trading series of options in that class. Only option contracts in series of options currently open for trading may be purchased or written on the Exchange. Prior to the opening of trading in a given series, the Exchange will fix the type of option, expiration month, year and exercise price of that series. Exercise-price setting parameters adopted as part of the Options Listing Procedures Plan ("OLPP") are set forth in Rule 404A. For Short Term Option Series, the Exchange will fix a specific expiration date and exercise price of that series, as provided in Interpretations and Policies .02. For Quarterly Options Series, the Exchange will fix a specific expiration date and exercise price of that series, as provided in Interpretations and Policies .03.

(b) Except as otherwise provided in this Rule 404 and Interpretations and Policies hereto, at the commencement of trading on the Exchange of a particular type of option of a class of options, the Exchange shall open a minimum of one expiration month and series for each class of options open for trading on the Exchange. The exercise price of each series will be fixed at a price per share, which is reasonably close to the price per share at which the underlying stock is traded in the primary market at about the time that class of options is first opened for trading on the Exchange.

(c) Additional series of options of the same class may be opened for trading on the Exchange when the Exchange deems it necessary to maintain an orderly market, to meet customer demand or when the market price of the underlying stock moves more than five strike prices from the initial exercise price or prices. The opening of a new series of options shall not affect the series of options of the same class previously opened.

(d) Except as otherwise provided in this Rule 404 and the Interpretations and Policies hereto, the interval between strike prices of series of options on individual stocks will be:

(1) $2.50 or greater where the strike price is $25.00 or less;

(2) $5.00 or greater where the strike price is greater than $25.00; and

(3) $10.00 or greater where the strike price is greater than $200.00.

(e) New series of options on an individual stock may be added until the beginning of the month in which the option contract will expire. Due to unusual market conditions, the Exchange, in its discretion, may add new series of options on an individual stock until the close of trading on the business day prior to expiration.

(f) The Exchange may select up to 60 options classes on individual stocks for which the interval of strike prices will be $2.50 where the strike price is greater than $25 but less than $50 (the "$2.50 Strike Price Program"). On any option class that has been selected as part of this $2.50 Strike Price Program, $2.50 strike prices between $50 and $100 may be listed, provided that $2.50 strike prices between $50 and $100 are no more than $10 from the closing price of the underlying stock in its primary market on the preceding day. For example, if an options class has been selected as part of the $2.50 Strike Price Program, and the underlying stock closes at $48.50 in its primary market, the Exchange may list the $52.50 strike price and the $57.50 strike price on the next business day. If an underlying security closes at $54, the Exchange may list the $52.50 strike price, the $57.50 strike price and the $62.50 strike price on the next business day. The Exchange may also list $2.50 strike price series on any option classes that are selected by other securities exchanges that have a similar program under their respective rules.

(g) The interval between strike prices of series of options on Exchange-Traded Fund Shares approved for options trading pursuant to Rule 402(i) shall be fixed at a price per share which is reasonably close to the price per share at which the underlying security is traded in the primary market at or about the same time such series of options is first open for trading on the Exchange, or at such intervals as may have been established on another options exchange prior to the initiation of trading on the Exchange.

Interpretations and Policies:

.01 **$1 Strike Price Interval Program.**

(a) The interval between strike prices of series of options on individual stocks may be $1.00 or greater provided the strike price is $50.00 or less, but not less than $1. Except as provided in subparagraph (c) below, the listing of $1 strike price intervals shall be limited to options classes overlying no more than 150 individual stocks (the "$1 Strike Price Interval Program") as specifically designated by the Exchange. The Exchange may list $1 strike prices on any other options class if those classes are specifically designated by other securities exchanges that employ a $1 Strike Price Interval Program under their respective rules. If a class participates in the $1 Strike Price Interval Program, $2.50 strike price intervals are not permitted between $1 and $50 for non-LEAPs and LEAPs.

(b) **Eligibility for the $1 Strike Price Interval Program.** To be eligible for inclusion into the $1 Strike Price Interval Program, an underlying stock must close below $50 in its primary market on the previous trading day.

(c) **Strike Prices to be Added.** After a stock is added to the $1 Strike Price Interval Program, the Exchange may list $1 strike price intervals from $1 to $50 according to the following parameters:

(1) If the price of the underlying stock is equal to or less than $20, the Exchange may list series with an exercise price up to 100% above and 100% below the price of the underlying stock. However, the foregoing restriction shall not prohibit the listing of at least five (5) strike prices above and below the price of the underlying stock per expiration month in an option class. For example, if the price of the underlying stock is $2, the Exchange would be permitted to list the following series: $1, $2, $3, $4, $5, $6 and $7.

(2) If the price of the underlying stock is greater than $20, the Exchange may list series with an exercise price up to 50% above and 50% below the price of the underlying security up to $50.

(3) For the purpose of adding strikes under the $1 Strike Price Interval Program, the "price of the underlying stock" shall be measured in the same way as "the price of the underlying security" is as set forth in Rule 404A(b)(1).

(4) No additional series in $1 strike price intervals may be listed if the underlying stock closes at or above $50 in its primary market. Additional series in $1 strike price intervals may not be added until the underlying stock closes again below $50.

(d) **Long-Term Option Series ("LEAPS®")**

(1) The Exchange may list $1 strike prices up to $5 in LEAPS in up to 200 classes on individual stocks. The Exchange may not list strike prices with $1 intervals within $0.50 of an existing $2.50 strike price in the same series.

(2) For stocks in the $1 Strike Price Interval Program, the Exchange may list one $1 strike price interval between each standard $5 strike interval, with the $1 strike price interval being $2 above the standard strike for each interval above the price of the underlying stock, and $2 below the standard strike for each interval below the price of the underlying stock. For example, if the price of the underlying stock is $24.50, the Exchange may list the following standard strikes in $5 intervals: $15, $20, $25, $30 and $35. Between these standard $5 strikes, the Exchange may list the following $2 wings: $18, $27 and $32.

(3) In addition, the Exchange may list the $1 strike price interval which is $2 above the standard strike just below the underlying price at the time of listing. In the above example, since the standard strike just below the underlying price ($24.50) is $20, the Exchange may list a $22 strike. The Exchange may add additional long-term options series strikes as the price of the underlying stock moves, consistent with the Options Listing Procedures Plan. Additional long-term option strikes may not be listed within $1 of an existing strike until less than nine months to expiration.

(e) **$1 Strike Price Interval Program Delisting Policy.**

(1) For options classes selected to participate in the $1 Strike Price Interval Program, the Exchange will, on a monthly basis, review series that were originally listed under the $1 Strike Price Interval Program with strike prices that are more than $5 from the current value of an options class and delist those series with no open interest in both the put and the call series having a: (i) strike higher than the highest strike price with open interest in the put and/or call series for a given expiration month; and (ii) strike lower than the lowest strike price with open interest in the put and/or call series for a given expiration month.

(2) If the Exchange identifies series for delisting pursuant to this policy, the Exchange shall notify other options exchanges with similar delisting policies regarding eligible series for delisting, and shall work jointly with such other exchanges to develop a uniform list of series to be delisted so as to ensure uniform series delisting of multiply listed options classes.

(3) Notwithstanding the above delisting policy, Member requests to add strikes and/or maintain strikes in series of options classes traded pursuant to the $1 Strike Price Interval Program that are eligible for delisting may be granted.

(f) A stock shall remain in the $1 Strike Price Interval Program until otherwise designated by the Exchange.

.02 **Short Term Option Series Program.** After an option class has been approved for listing and trading on the Exchange, the Exchange may open for trading on any Thursday or Friday that is a business day ("Short Term Option Opening Date") series of options on that class that expire at the close of business on each of the next five Fridays that are business days and are not Fridays in which monthly options series or Quarterly Options Series expire ("Short Term Option Expiration Dates"). The Exchange may have no more than a total of five Short Term Option Expiration Dates. Monday and Wednesday SPY Expirations (described in the paragraph below) are not included as part of this count. If the Exchange is not open for business on the respective Thursday or Friday, the Short Term Option Opening Date will be the first business day immediately prior to that respective Thursday or Friday. Similarly, if the Exchange is not open for business on a Friday, the Short Term Option Expiration Date will be the first business day immediately prior to that Friday.

The Exchange may open for trading on any Tuesday or Wednesday that is a business day ("Wednesday SPY Expiration Opening Date") series of options on the SPDR S&P 500 ETF Trust ("SPY") that expire at the close of business on each of the next five Wednesdays that are business days and are not Wednesdays on which Quarterly Options Series expire ("Wednesday SPY Expirations"). The Exchange may have no more than a total of five Wednesday SPY Expirations. Non-Wednesday SPY Expirations (described in the paragraph above) are not included as part of this count. If the Exchange is not open for business on the respective Tuesday or Wednesday, the Wednesday SPY Expiration Opening Date will be the first business day immediately prior to that respective Tuesday or Wednesday. Similarly, if the Exchange is not open for business on a Wednesday, the expiration date for a Wednesday SPY Expiration will be the first business day immediately prior to that Wednesday. References to "Short Term Option Series" below shall be read to include "Wednesday SPY Expirations," except where indicated otherwise.

With respect to Wednesday SPY Expirations, the Exchange may open for trading on any Tuesday or Wednesday that is a business day series of options on the SPDR S&P 500 ETF Trust ("SPY") to expire on any Wednesday of the month that is a business day and is not a Wednesday in which Quarterly Options Series expire ("Wednesday SPY Expirations"). With respect to Monday SPY Expirations, the Exchange may open for trading on any Friday or Monday that is a business day series of options on SPY to expire on any Monday of the month that is a business day and is not a Monday in which Quarterly Options Series expire ("Monday SPY Expirations"), provided that Monday SPY Expirations that are listed on Friday must be listed at least one business week and one business day prior to the expiration. The Exchange may list up to five consecutive Wednesday SPY Expirations and five consecutive Monday SPY Expirations at one time; the Exchange may have no more than a total of five Wednesday SPY Expirations and a total of five Monday SPY Expirations. Monday and Wednesday SPY Expirations will be subject to the provisions of this Rule.

Regarding Short Term Option Series:

(a) **Classes**. The Exchange may select up to fifty (50) currently listed option classes in which Short Term Option Series may be opened on any Short Term Option Opening Date. In addition to the 50 option class restriction, the Exchange may also list Short Term Option Series on any option classes that are selected by other securities exchanges that employ a similar Pilot Program under their respective rules. For each option class eligible for participation in the Short Term Option Series Pilot Program, the Exchange may open up to thirty (30) Short Term Option Series for each expiration date in that class.

(b) **Expiration**. No Short Term Option Series (excluding Monday and Wednesday SPY Expirations) may expire in the same week in which monthly option series on the same class expires. In the case of Quarterly Options Series, no Short Term Option Series may expire on the same day as an expiration of Quarterly Options Series in the same class.

(c) **Initial Series.** The Exchange may open up to 30 initial series for each option class that participates in the Short Term Option Series Program. The strike price of each Short Term Option Series will be fixed at a price per share, with approximately the same number of strike prices above and below the value of the underlying security at about the time that Short Term Option Series are initially opened for trading on the Exchange (e.g., if seven series are initially opened, there will be at least three strike prices above and three strike prices below the value of the underlying security). Any strike prices listed by the Exchange shall be reasonably close to the price of the underlying equity security and within the following parameters: (i) if the price of the underlying security is less than or equal to $20, strike prices shall be not more than one hundred percent (100%) above or below the price of the underlying security; and (ii) if the price of the underlying security is greater than $20, strike prices shall be not more than fifty percent (50%) above or below the price of the underlying security.

(d) **Additional Series.** If the Exchange opens less than thirty (30) Short Term Option Series for a Short Term Option Expiration Date, additional series may be opened for trading on the Exchange when the Exchange deems it necessary to maintain an orderly market, to meet customer demand or when the market price of the underlying security moves substantially from the exercise price or prices of the series already opened. Any additional strike prices listed by the Exchange shall be reasonably close to the price of the underlying equity security and within the following parameters: (i) if the price of the underlying security is less than or equal to $20, strike prices shall be not more than one hundred percent (100%) above or below the price of the underlying security; and (ii) if the price of the underlying security is greater than $20, strike prices shall be not more than fifty percent (50%) above or below the price of the underlying security. The Exchange may also open additional strike prices on Short Term Option Series that are more than 50% above or below the current price of the underlying security (if the price is greater than $20) provided that demonstrated customer interest exists for such series, as expressed by institutional, corporate or individual customers or their brokers. Market Makers trading for their own account shall not be considered when determining customer interest under this provision. In the event that the underlying security has moved such that there are no series that are at least 10% above or below the current price of the underlying security, the Exchange will delist any series with no open interest in both the call and the put series having a: (i) strike higher than the highest strike price with open interest in the put and/or call series for a given expiration week; and (ii) strike lower than the lowest strike price with open interest in the put and/or the call series for a given expiration week. The opening of new Short Term Option Series shall not affect the series of options of the same class previously opened. Notwithstanding any other provisions in this Rule 404, Short Term Option Series may be added up to and including on the Short Term Option Expiration Date for that options series.

(e) **Strike Price Interval.** The strike price interval for Short Term Option Series may be $0.50 or greater for option classes that trade in $1 strike price intervals and are in the Short Term Option Series Program. If the class does not trade in $1 strike price intervals, the strike price interval for Short Term Option Series may be $0.50 or greater where the strike price is less than $100 and $1.00 or greater where the strike price is between $100 and $150, and $2.50 or greater for strike prices greater than $150. A non-Short Term Option series that is included in a class that has been selected to participate in the Short Term Option Series Program is referred to as a "Related non-Short Term Option." Notwithstanding any other provision regarding strike prices in this Rule, Related non-Short Term Option series shall be opened during the month prior to expiration in the same manner as permitted in Rule 404, Interpretations and Policies .02, and in the same strike price intervals for the Short Term Option Series permitted in this Rule 404, Interpretations and Policies .02(e).

.03 **Quarterly Options Series Program.** The Exchange may list and trade options series that expire at the close of business on the last business day of a calendar quarter ("Quarterly Options Series"). The Exchange may list Quarterly Options Series for up to five (5) currently listed options classes that are options on exchange traded funds ("ETFs"). In addition, the Exchange may also list Quarterly Options Series on any options classes that are selected by other securities exchanges that employ a similar program under their respective rules.

(a) The Exchange may list series that expire at the end of the next consecutive four (4) calendar quarters, as well as the fourth quarter of the next calendar year.

(b) The Exchange will not list a Short Term Option Series on an options class whose expiration coincides with that of a Quarterly Options Series on that same options class.

(c) **Initial Series**. The strike price of each Quarterly Options Series will be fixed at a price per share, with at least two strike prices above and two strike prices below the approximate value of the underlying security at about the time that a Quarterly Options Series is opened for trading on the Exchange. The Exchange shall list strike prices for a Quarterly Options Series that are within $5 from the closing price of the underlying on the preceding day.

(d) **Additional Series**. Additional Quarterly Options Series of the same class may be opened for trading on the Exchange when the Exchange deems it necessary to maintain an orderly market, to meet customer demand or when the market price of the underlying security moves substantially from the initial exercise price or prices. To the extent that any additional strike prices are listed by the Exchange, such additional strike prices shall be within thirty percent (30%) above or below the closing price of the underlying ETF or Exchange-Traded Fund Shares as defined in Rule 402(i)) on the preceding day. The Exchange may also open additional strike prices of Quarterly Options Series in ETF options that are more than 30% above or below the current price of the underlying ETF provided that demonstrated customer interest exists for such series, as expressed by institutional, corporate or individual customers or their brokers. Market Makers trading for their own account shall not be considered when determining customer interest under this provision. The opening of new Quarterly Options Series shall not affect the series of options of the same class previously opened.

(e) The interval between strike prices on Quarterly Options Series shall be the same as the interval for strike prices for series in that same options class that expire in accordance with the normal monthly expiration cycle.

(f) **Delisting Policy**. With respect to Quarterly Options Series in ETF options added pursuant to the above paragraphs, the Exchange will, on a monthly basis, review series that are outside a range of five (5) strikes above and five (5) strikes below the current price of the underlying ETF, and delist series with no open interest in both the put and the call series having a: (1) strike higher than the highest strike price with open interest in the put and/or call series for a given expiration month; and (2) strike lower than the lowest strike price with open interest in the put and/or call series for a given expiration month.

(g) Notwithstanding the above referenced delisting policy, customer requests to add strikes and/or maintain strikes in Quarterly Options Series in ETF options in series eligible for delisting shall be granted.

(h) In connection with the above referenced delisting policy, if the Exchange identifies series for delisting, the Exchange shall notify other options exchanges with similar delisting policies regarding eligible series for delisting, and shall work with such other exchanges to develop a uniform list of series to be delisted, so as to ensure uniform series delisting of multiply listed Quarterly Options Series in ETF options.

.04 **$0.50 Strike Program.** The interval of strike prices of series of options on individual stocks may be $0.50 or greater beginning at $0.50 where the strike price is $5.50 or less, but only for options classes whose underlying security closed at or below $5.00 in its primary market on the previous trading day and which have national average daily volume that equals or exceeds 1,000 contracts per day as determined by The Options Clearing Corporation during the preceding three calendar months. The listing of $0.50 strike prices shall be limited to options classes overlying no more than 20 individual stocks (the "$0.50 Strike Program") as specifically designated by the Exchange. The Exchange may list $0.50 strike prices on any other option classes if those classes are specifically designated by other securities exchanges that employ a similar $0.50 Strike Program under their respective rules. A stock shall remain in the $0.50 Strike Program until otherwise designated by the Exchange.

.05 Notwithstanding Interpretations and Policies .01 above, the interval between strike prices of series of options on Indexed-Linked Securities, as defined in Rule 402(k)(1), will be $1 or greater when the strike price is $200 or less and $5 or greater when the strike price is greater than $200.

.06 Notwithstanding Interpretations and Policies .01 above, the interval between strike prices of series of options on Trust Issued Receipts, including Holding Company Depository Receipts (HOLDRs), will be $1 or greater where the strike price is $200 or less and $5 or greater where the strike price is greater than $200.

.07 **$0.50 and $1.00 Strike Price Intervals for Options Used to Calculate Volatility Indexes.** Notwithstanding the requirements set forth in Rule 404(f) and Interpretations and Policies .01, .05 and .06 above, the Exchange may open for trading series at $0.50 or greater strike price intervals where the strike price is less than $75, and $1.00 or greater strike price intervals where the strike price is between $75 and $150 for options that are used to calculate a volatility index.

.08 **Mini Option Contracts.**

(a) After an option class on a stock, exchange-traded fund (ETF) share, Trust Issued Receipt (TIR), and other Equity Index-Linked Security with a 100 share deliverable has been approved for listing and trading on the Exchange, series of option contracts with a 10 share deliverable on that stock, ETF share, TIR, and other Equity Index-Linked Security may be listed for all expirations opened for trading on the Exchange. Mini-option contracts may currently be listed on SPDR S&P 500 (SPY), Apple, Inc. (AAPL), SPDR Gold Trust (GLD), Alphabet, Inc. (GOOGL) and Amazon.com Inc. (AMZN).

(b) Strike prices for mini-options shall be set at the same level as for standard options. For example, a call series strike price to deliver 10 shares of stock at $125 per share has a total deliverable value of $1250, and the strike price will be set at 125.

(c) No additional series of mini-options may be added if the underlying security is trading at $90 or less. The underlying security must trade above $90 for five consecutive days prior to listing mini-option contracts in an additional expiration month.

(d) The minimum price variation for bids and offers for mini-options shall be the same as permitted for standard options on the same security. For example, if a security participates in the Penny Pilot Program, mini-options on the same underlying security may be quoted in the same minimum increments, e.g., $0.01 for all quotations in series that are quoted at less than $3 per contract and $0.05 for all quotations in series that are quoted at $3 per contract or greater, $0.01 for all SPY option series, and mini-options do not separately need to qualify for the Penny Pilot Program.

.09 Notwithstanding any other provision regarding strike prices in this Rule, Related non-Short Term Option series shall be opened during the month prior to expiration in the same manner as permitted in Rule 404, Interpretations and Policies .02, and in the same strike price intervals for the Short Term Option Series permitted in this Rule 404, Interpretations and Policies .02(e).

.10 Notwithstanding any other provision regarding the interval of strike prices of series of options on Exchange-Traded Fund Shares in this Rule, the interval of strike prices on SPDR S&P 500 ETF ("SPY"), iShares S&P 500 Index ETF ("IVV"), PowerShares QQQ Trust ("QQQ"), iShares Russell 2000 Index Fund ("IWM"), and the SPDR Dow Jones Industrial Average ETF ("DIA") options will be $1 or greater.

[Adopted: December 13, 2016; amended February 6, 2017 (SR-PEARL-2017-03); amended April 3, 2017 (SR-PEARL-2017-11); amended July 21, 2017 (SR-PEARL-2017-32); amended February 12, 2018 (SR-PEARL-2018-03); amended March 21, 2019 (SR-PEARL-2019-10); amended May 7, 2019 (SR-PEARL-2019-18)]

Rule 404A. Select Provisions of Options Listing Procedures Plan

(a) The provisions set forth in this Rule 404A were adopted by the Exchange as a quote mitigation strategy and are codified in the Options Listing Procedures Plan ("OLPP"). A complete copy of the current OLPP may be accessed at: http://www.optionsclearing.com/components/docs/clearing/ services/options_listing_procedures_plan.pdf.

(b) The exercise price of each options series listed by the Exchange shall be fixed at a price per share which is reasonably close to the price of the underlying equity security, Exchange Traded Fund ("ETF" and referred to as Exchange Traded Fund Shares in Rule 402(i)) or Trust Issued Receipt ("TIR") at or about the time the Exchange determines to list such series. Additionally,

(1) Except as provided in subparagraphs (2) through (4) below, if the price of the underlying security is less than or equal to $20, the Exchange shall not list new options series with an exercise price more than 100% above or below the price of the underlying security. However, the foregoing restriction shall not prohibit the listing of at least three exercise prices per expiration month in an options class. Except as provided in Interpretation and Policy .02(d) to Rule 404, if the price of the underlying security is greater than $20, the Exchange shall not list new options series with an exercise price more than 50% above or below the price of the underlying security. The price of the underlying security is measured by:

(i) for intra-day add-on series and next-day series additions, the daily high and low of all prices reported by all national securities exchanges;

(ii) for new expiration months, the daily high and low of all prices reported by all national securities exchanges on the day the Exchange determines its preliminary notification of new series;

(iii) for options series to be added as a result of pre-market trading, the most recent share price reported by all national securities exchanges between 8:45 a.m. and 9:30 a.m. Eastern Time; and

(iv) for options series to be added based on trading following regular trading hours, the most recent share price reported by all national securities exchanges between 4:15 p.m. and 6:00 p.m. Eastern Time.

(2) The series exercise price range limitations contained in subparagraph (i) above do not apply with regard to:

(i) the listing of $1 strike prices in options classes participating in the $1 Strike Program. Instead, the Exchange shall be permitted to list $1 strike prices to the fullest extent as permitted under its rules for the $1 Strike Program; or

(ii) the listing of series of Flexible Exchange Options.

(3) The Exchange may designate up to five options classes to which the series exercise price range may be up to 100% above and below the price of the underlying security (which underlying security price shall be determined in accordance with subparagraph (i) above). Such designations shall be made on an annual basis and shall not be removed during the calendar year unless the options class is delisted by the Exchange, in which case the Exchange may designate another options class to replace the delisted class. If a designated options class is delisted by the Exchange but continues to trade on at least one options exchange, the options class shall be subject to the limitations on listing new series set forth in subparagraph (i) above unless designated by another exchange.

(4) If the Exchange that has designated five options classes pursuant to subparagraph (3) above requests that one or more additional options classes be excepted from the limitations on listing new series set forth in subparagraph (1) above, the additional options class(es) shall be so designated upon the unanimous consent of all exchanges that trade the options class(es). Additionally, pursuant to the Exchange's request, the percentage range for the listing of new series may be increased to more than 100% above and below the price of the underlying security for an options class, by the unanimous consent of all exchanges that trade the designated options class. Exceptions for an additional class or for an increase of the exercise price range shall apply to all standard expiration months existing at the time of the vote, plus the next standard expiration month to be added, and also to any non-standard expirations that occur prior to the next standard monthly expiration.

(5) The provisions of this subparagraph (b) shall not permit the listing of series that are otherwise prohibited by the Rules of the Exchange or the OLPP. To the extent the Rules of the Exchange permit the listing of new series that are otherwise prohibited by the provisions of the OLPP, the provisions of the OLPP shall govern.

(6) The Exchange may list an options series that is listed by another options exchange, provided that at the time such series was listed it was not prohibited under the provisions of the OLPP or the rules of the exchange that initially listed the series.

[Adopted: December 13, 2016; amended August 30, 2018 (SR-PEARL-2018-18)]

Rule 405. Adjustments

Option contracts shall be subject to adjustments in accordance with the Rules of the Clearing Corporation. When adjustments have been made, the Exchange will announce that fact, and such changes will be effective for all subsequent transactions in that series at the time specified in the announcement.

[Adopted: December 13, 2016]

Rule 406. Long-Term Option Contracts

(a) Notwithstanding conflicting language in Rule 404, the Exchange may list long-term option contracts that expire from twelve (12) to thirty-nine (39) months from the time they are listed ("long-term expiration months"). There may be up to ten long-term expiration months for options on the SPDR® S&P 500® exchange-traded fund ("SPY") and up to six (6) long-term expiration months for all other option classes. Strike price interval (Rule 404) and continuous quoting (Rule 605(d)) Rules shall not apply to such options series until the time to expiration is less than nine (9) months.

(b) With regard to the listing of new January LEAPS series on equity options classes, options on Exchange Traded Funds ("ETFs"), or options on Trust Issued Receipts ("TIRs"), the Exchange shall not add new LEAP series on a currently listed and traded option class earlier than the Monday prior to the September expiration (which is 28 months before the expiration).

Pursuant to the Options Listing Procedures Plan, exchanges that list and trade the same equity option class, ETF option class, or TIR option class are authorized to jointly determine and coordinate with the Options Clearing Corporation on the date of introduction of new LEAP series for that option class consistent with this paragraph (b).

(c) The Exchange shall not list new LEAP series on equity option classes, options on ETFs, or options on TIRs in a new expiration year if the national average daily contract volume, excluding LEAP and FLEX series, for that option class during the preceding three (3) calendar months is less than 1,000 contracts, unless the new LEAP series has an expiration year that has already been listed on another exchange for that option class. The preceding volume threshold does not apply during the first six (6) months an equity option class, option on an ETF, or option on a TIR is listed on any exchange.

[Adopted: December 13, 2016; amended July 5, 2017 (SR-PEARL-2017-28); amended August 30, 2018 (SR-PEARL-2018-18); amended November 16, 2018 (SR-PEARL-2018-24)]

CHAPTER V. DOING BUSINESS ON THE EXCHANGE

Rule 500. Access to and Conduct on the Exchange

(a) **Access to Exchange.** Unless otherwise provided in the Rules, no one but a Member or a person associated with a Member shall effect any Exchange Transactions. The Exchange may share any Member-designated risk settings in the Exchange System with the Clearing Member that clears Exchange Transactions on behalf of the Member.

(b) **Exchange Conduct.** Members and persons employed by or associated with any Member, while using the facilities of the Exchange, shall not engage in conduct (1) inconsistent with the maintenance of a fair and orderly market; (2) apt to impair public confidence in the operations of the Exchange; or (3) inconsistent with the ordinary and efficient conduct of business. Activities that may violate the provisions of this paragraph (b) include, but are not limited to, the following:

(i) failure of a Market Maker to provide quotations in accordance with Rule 605.

(ii) failure of a Member to supervise a person employed by or associated with such Member adequately to ensure that person's compliance with this paragraph (b).

(iii) failure to abide by a determination of the Exchange.

(iv) refusal to provide information requested by the Exchange.

(v) failure to abide by the provisions of Rule 520.

[Adopted: December 13, 2016]

Rule 501. Days and Hours of Business

The Exchange will begin accepting orders at 7:30 a.m. Eastern Time. The hours during which option transactions may be made on the Exchange shall be from 9:30 a.m. Eastern Time to 4:00 p.m. Eastern Time except for option contracts on Exchange Traded Fund Shares, as defined in Rule 402(i), and Index-Linked Securities, as defined in Rule 402(k)(1), which may remain open for trading beyond 4:00 p.m. Eastern Time but in no case later than 4:15 p.m. Eastern Time, as designated by the Exchange.

Interpretations and Policies:

.01 The Board has resolved that, except under unusual conditions as may be determined by the Board or its designee, hours during which transactions in options on individual stocks may be made on the Exchange shall correspond to the normal hours for business set forth in the rules of the primary exchange listing the stocks underlying Exchange options.

.02 The Board has determined that the Exchange will not be open for business on New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day or Christmas Day. The Board has also determined that, in most circumstances when a holiday observed by the Exchange falls on a Saturday, the Exchange will not be open for business on the preceding Friday, and that when a holiday observed by the Exchange falls on a Sunday, the Exchange will not be open for business on the following Monday.

[Adopted: December 13, 2016]

Rule 502. Entry of Orders

Members can enter orders into the System, subject to the requirements and conditions set forth below and in these Rules:

(a) Members shall be permitted to transmit to the System multiple orders at a single as well as multiple price levels.

(b) The System shall time-stamp an order which shall determine the time ranking of the order for purposes of processing the order.

[Adopted: December 13, 2016]

Rule 503. Openings on the Exchange

(a) **Definitions**. For the purposes of this Rule the term:

(1) "**Opening Process**" shall mean the process for opening or resuming trading pursuant to this Rule and shall include the process for determining the price at which Eligible Interest shall be executed at the open of trading for the day, or the open of trading for a halted option, and the process for executing that Eligible Interest.

(2) "**Eligible Interest**" shall mean any quotation or any order that may be entered into the System before the opening. The order types that may participate in the Opening Process are set forth in Rule 516.

(3) "**Market for the Underlying Security**" shall mean either the primary listing market, the primary volume market (defined as the market with the most liquidity in that underlying security for the previous two calendar months), or the first market to open the underlying security, as determined by the Exchange on a class by class basis and announced to Members on the Exchange's website.

(4) "**Valid Width National Best Bid or Offer**" or "**Valid Width NBBO**" shall mean the combination of all away market quotes and any combination of MIAX PEARL Market Maker orders and quotes received from a minimum number of away markets and a minimum number of MIAX PEARL Market Makers within a specified bid/ask differential each as established and published by the Exchange on its website. The Valid Width NBBO will be configurable by the underlying, and tables with valid width differentials will be posted by MIAX PEARL on its website. Away markets that are crossed will void all Valid Width NBBO calculations. If any Market Maker orders or quotes on MIAX PEARL are crossed internally, then all such orders and quotes will be excluded from the Valid Width NBBO calculation. If any Market Maker orders or quotes on MIAX PEARL are locking or crossing the ABBO, the Market Maker's orders or quotes will be considered to be at the locked or crossed ABBO price for purposes of calculating the Valid Width NBBO.

(5) "**Away Best Bid or Offer**" or "**ABBO**" shall mean the best bid(s) or offer(s) disseminated by other Eligible Exchanges (defined in Rule 1400(f)) and calculated by the Exchange based on market information received by the Exchange from OPRA.

(b) **Opening Process on the Exchange.** For the opening of trading of securities by the System, the Opening Process shall occur at or after 9:30 a.m. Eastern Time, if the dissemination of a regular market hours quote or trade (as determined by the Exchange) by the Market for the Underlying Security has occurred. Following the dissemination of a quote or trade in the Market for the Underlying Security (the "First Market Event") the System will pause for a period of time no longer than one-half second to allow the market place to absorb this information. Or, in the case of a trading halt, the Opening Process shall occur when trading resumes pursuant to Rule 504. Market hours trading shall commence or, in the case of a halted option, resume when the MIAX PEARL Opening Process concludes.

(1) **Criteria for the Opening**. The opening of trading or resumption of trading after a halt of securities by the System will be dependent on the following criteria, provided the ABBO is not crossed.

(i) If there is locking or crossing interest on MIAX PEARL or interest that locks or crosses the NBBO, a Valid Width NBBO must be present.

(ii) If there is no locking or crossing interest on MIAX PEARL and no interest that locks or crosses the NBBO, then the Exchange will open dependent upon one of the following:

(A) A Valid Width NBBO is present; or

(B) A certain number of other options exchanges (as determined by the Exchange and posted by MIAX PEARL on its website) have disseminated a firm quote on OPRA; or

(C) A certain period of time (as determined by the Exchange and posted by MIAX PEARL on its website) has elapsed.

(2) **Opening Process Where There is Locking or Crossing Interest on MIAX PEARL or Interest that Locks or Crosses the NBBO.**

(i) **Determining the Opening Price**. After the First Market Event has occurred and/or the trading halt has been lifted and the criteria for opening set forth in subsection (1)(i) above has been met, in each case where there are orders or quotes with internally locking or crossing prices, or orders that lock or cross the NBBO, for a particular option series the System will determine a single price at which such option series will be opened (the "Opening Price"). The Opening Price of a series will be the midpoint of the Valid Width NBBO, rounded up if necessary (the "NBBO Midpoint").

(ii) **Matching Orders and Quotes in the System**. After establishing an Opening Price, orders and quotes in the System that are priced equal to or more aggressively than the Opening Price will be matched based on price-time priority. Matches will occur until there is no remaining volume or there is an imbalance of orders. All orders and quotes or portions thereof that are matched pursuant to the Opening Process will be executed at the Opening Price.

(iii) **Regarding Unexecuted Contracts.** An imbalance of orders on the buy side or sell side may result in orders that are not executed in whole or in part. Such orders will be handled at the conclusion of the Opening Process in time sequence, beginning with the order with the oldest time stamp and may, in whole or in part, be placed on the Book, cancelled, executed, managed in accordance with Rule 515, or routed in accordance with Rule 529.

(iv) **Execution and Reporting**. All Eligible Interest executed in the Opening Process shall be executed at the Opening Price, trade reported anonymously, and disseminated via a national market system plan.

(3) **Opening Process Where There is No Locking or Crossing Interest on MIAX PEARL and no Interest that Locks or Crosses the NBBO**. After the First Market Event has occurred and/or the trading halt has been lifted and the criteria for opening set forth in subsection (1)(ii) above has been met, and where there are no contracts in a particular series that would execute at any price the System shall open such options for trading without determining an Opening Price. The System will open such series by disseminating via a national market system plan the Exchange's best bid and offer among quotes and orders that exist in the System at that time. Orders in the System will be handled at the conclusion of the Opening Process in time sequence, beginning with the order with the oldest time stamp and may, in whole or in part, be placed on the Book, cancelled, executed, managed in accordance with Rule 515, or routed in accordance with Rule 529.

(c) **Deviation from Standard Opening Process.** The Exchange may deviate from the standard manner of the Opening Process, including adjusting the timing of the Opening Process in any option class, when it believes it is necessary in the interests of a fair and orderly market.

(d) **Certain Locking or Crossing Orders or Quotes.** If any order or quote entered by a Market Maker on MIAX PEARL via the MEO Interface or the FIX Interface using the same MPID is locking or crossing another order or

quote entered by the same Market Maker using the same MPID via the MEO Interface or the FIX Interface during the Opening Process, then the System will cancel the oldest of the Market Maker's locking or crossing order or quote prior to execution.

[Adopted: December 13, 2016; amended May 18, 2017 (SR-PEARL-2017-22); amended May 6, 2018 (SR-PEARL-2018-10)]

Rule 504. Trading Halts

(a) **Halts.**

(1) The System may halt trading in the case of an option on a security, when trading in the underlying security has been halted or suspended in the primary market; and

(2) The Help Desk may halt trading in any security in the interests of a fair and orderly market for a period not in excess of two consecutive business days. The Help Desk, in consultation with a designated senior executive officer of the Exchange, may halt trading in any security in the interests of a fair and orderly market for a period exceeding two consecutive business days. Any trading halt that lasts more than two consecutive business days shall be reviewed by the President or his/her designee, who shall be authorized to determine whether, in the interests of a fair and orderly market, to terminate or modify any such trading halt that is then still in effect. Among the factors that may be considered in making the foregoing determinations are whether:

(i) in the case of an option on a security, trading in the underlying security has been halted or suspended in the primary market;

(ii) in the case of an option on a security, the opening of such underlying security has been delayed because of unusual circumstances;

(iii) the extent to which the Opening Process has been completed or other factors regarding the status of the Opening Process; or

(iv) other unusual conditions or circumstances are present.

(3) The Exchange shall disseminate through its trading facilities and over OPRA a symbol in respect of a security halted in accordance with (1) or (2) above indicating that trading has been halted. A record of the time and duration of the halt shall be made available to vendors.

(b) **Resumptions.** Trading in a security that has been the subject of a halt under paragraph (a) above may be resumed upon a determination by the Help Desk that the interests of a fair and orderly market are best served by a resumption of trading. Among the factors to be considered in making this determination are whether the conditions which led to the halt are no longer present. Trading shall resume according to the process set forth in Rule 503 of these Rules.

(c) **Trading Pauses.** Trading on the Exchange in any option contract shall be halted whenever trading in the underlying security has been paused by the primary market. Trading in such options contracts may be resumed upon a determination by the Exchange that the conditions that led to the pause are no longer present and that the interests of a fair and orderly market are best served by a resumption of trading, which in no circumstances will be before the Exchange has received notification that the underlying security has resumed trading on at least one exchange.

(d) **Post-Halt Notification.** After the Exchange has determined to end a trading halt, the System will broadcast to subscribers of the Exchange's data feeds a Post-Halt Notification.

(1) Regarding a halt pursuant to section (a) above, the Post-Halt Notification will be broadcast twenty seconds before trading will begin or resume.

(2) Regarding a halt initiated by the System due to a regulatory halt, trading pause or market-wide trading halt, a Post-Halt Notification will be broadcast between five and twenty seconds before trading will begin or resume. The Exchange will announce the duration of the Post-Halt Notification period through a Regulatory Circular.

The Post-Halt Notification will state the time at which trading in the option class or classes is expected to resume providing subscribers of the Exchange's data feeds with a brief notice period (twenty seconds for halts pursuant to section (a) above; between five and twenty seconds for a regulatory halt, trading pause or market-wide trading halt) to prepare for the beginning or resumption of trading after a trading system halt has ended.

Interpretations and Policies:

.01 No Member or person associated with a Member shall effect a trade on the Exchange in any option class in which trading has been suspended or halted under the provisions of this Rule and its Interpretation and Policies during the time in which the suspension or halt remains in effect.

.02 Generally, in the case of an option on a security, trading will be halted when a regulatory halt in the underlying security has occurred in the primary listing market for that security.

.03 The Exchange shall halt trading in all securities whenever a market-wide trading halt commonly known as a circuit breaker is initiated on the New York Stock Exchange in response to extraordinary market conditions.

.04 Trades on the Exchange will be nullified when: (i) the trade occurred during a trading halt in the affected option on the Exchange; (ii) respecting equity options (including options overlying ETFs), the trade occurred during a regulatory halt as declared by the primary market for the underlying security; or (iii) with respect to index options, the trade occurred during a regulatory halt as declared by the primary market in underlying securities representing more than 10 percent of the current index value for narrow-based stock index options, and 20 percent of the current index value for broad-based index options.

.05 Trading halts, resumptions, trading pauses and post-halt notifications involving index options are governed by Rules 1808(c)-(f).

[Adopted: December 13, 2016; amended May 3, 2017 (SR-PEARL-2017-16); amended September 1, 2017 (SR-PEARL-2017-33); amended April 12, 2018 (SR-PEARL-2018-02)]

Rule 505. Member Electronic Connectivity

The Exchange may limit the number of messages sent by Members accessing the Exchange electronically in order to protect the integrity of the System. In addition, the Exchange may impose restrictions on the use of a computer connected through an API if it believes such restrictions are necessary to ensure the proper performance of the System. Any such restrictions shall be objectively determined and submitted to the Commission for approval pursuant to a rule change filing under Section 19(b) of the Exchange Act.

[Adopted: December 13, 2016]

Rule 506. Collection and Dissemination of Quotations

(a) Each Market Maker shall communicate to the Exchange its bids and offers in accordance with the requirements of Rule 602 of Regulation NMS under the Exchange Act and the Rules.

(b) The Exchange will disseminate to quotation vendors the highest bid and the lowest offer, and the aggregate quotation size associated therewith that is available to Public Customer Orders, in accordance with the requirements of Rule 602 of Regulation NMS under the Exchange Act.

(1) The Exchange shall disseminate an updated bid and offer price, together with the size associated with such bid and offer when:

(i) the Exchange's disseminated bid or offer price increases or decreases;

(ii) the size associated with the Exchange's disseminated bid or offer decreases; or

(iii) the size associated with the Exchange's bid (offer) increases by an amount greater than or equal to a percentage of the size associated with the previously disseminated bid (offer). Such percentage, which shall never be less than 10% or greater than 20%, shall be determined on a class-by-class basis by the Exchange and announced to the Membership through a Regulatory Circular.

(2) Executions will decrease the size associated with the Exchange's disseminated bid or offer by the amount of the execution.

(c) In the event there are no Market Makers quoting on a particular option and there are no orders on the Book, the Exchange will disseminate a bid price of $0.00, with a size of zero contracts and/or an offer price of $0.00, with a size of zero contracts.

(d) **Notification of Public Customer and Priority Customer Interest on the Book.**

(1) The Exchange will make available to subscribers to its data feeds and to all market participants through OPRA an indication that there is Public Customer interest included in the PBBOs disseminated by the Exchange.

(2) The Exchange will make available to subscribers to its Top of Market (ToM) data feed the quantity of Priority Customer contracts included in the PBBO disseminated by the Exchange.

(e) **Unusual Market Conditions.**

(1) An Exchange official designated by the Board shall have the power to determine that the level of trading activities or the existence of unusual market conditions is such that the Exchange is incapable of collecting, processing, and making available to quotation vendors the data for the option in a manner that accurately reflects the current state of the market on the Exchange. Upon making such a determination, the Exchange shall designate the market in such option to be "fast," and shall halt trading in the class or classes so affected.

(2) The Exchange will monitor the activity or conditions that caused a fast market to be declared, and a designated Exchange official shall review the condition of such market at least every thirty (30) minutes. Regular trading procedures shall be resumed by the Exchange when a designated Exchange official determines that the conditions supporting a fast market declaration no longer exist.

[Adopted: December 13, 2016; amended May 24, 2019 (SR-PEARL-2019-16)]

Rule 507. Give Up of a Clearing Member

(a) **General**. For each transaction in which a Member participates, a Member may indicate the name of any Options Clearing Corporation ("OCC") number of a Clearing Member through which the transaction will be cleared ("Give Up"), provided the Clearing Member has not elected to Opt In, as defined and described in paragraph (b) below, and restrict one or more of its OCC number(s) ("Restricted OCC Number"). A Member may Give Up a Restricted OCC Number provided the Member has written authorization as described in paragraph (b)(2) below ("Authorized Member").

(b) **Opt In**. Clearing Members may request the Exchange restrict one or more of their OCC clearing numbers ("Opt In") as described in subparagraph (1) below. If a Clearing Member Opts In, the Exchange will require written authorization from the Clearing Member permitting a Member to Give Up a Clearing Member's Restricted OCC

Number. An Opt In would remain in effect until the Clearing Member terminates the Opt In as described in subparagraph (3) below. If a Clearing Member does not Opt In, that Clearing Member's OCC number would be subject to Give Up by any Member.

(1) **Clearing Member Process to Opt In.** A Clearing Member may Opt In by sending a completed "Clearing Member Restriction Form" listing all Restricted OCC Numbers and Authorized Members. A Clearing Member may elect to restrict one or more OCC clearing numbers that are registered in its name at OCC. The Clearing Member would be required to submit the Clearing Member Restriction Form to the Exchange's Membership Department as described on the form. Once submitted, the Exchange requires ninety days before a Restricted OCC Number is effective within the System.

(2) **Member Give Up Process for Restricted OCC Numbers.** A Member desiring to Give Up an Restricted OCC Number must become an Authorized Member. The Clearing Member will be required to authorize a Member as described in subparagraph (1) or (3), unless the Restricted OCC Number is already subject to a Letter of Guarantee that the Member is a party to, as set forth in paragraph (d) below.

(3) **Amendments to Authorized Member or Restricted OCC Numbers.** A Clearing Member may amend its Authorized Members or Restricted OCC Numbers by submitting a new Clearing Member Restriction Form to the Exchange's Membership Department indicated the amendment as described on the form. Once a Restricted OCC Number is effective within the System pursuant to paragraph (1) above, the Exchange may permit the Clearing Member to authorize, or remove authorization for, a Member to Give Up the Restricted OCC Number intra-day only in unusual circumstances, and on the next business day in all regular circumstances. The Exchange will promptly notify Members if they are no longer authorized to Give Up a Clearing Member's Restricted OCC Number. If a Clearing Member removes a Restricted OCC Number, any Member may Give Up that OCC clearing number once the removal has become effective on or before the next business day.

(c) **System.** The System will not allow an unauthorized Member to Give Up a Restricted OCC Number at the firm mnemonic level at the point of order entry.

(d) **Letter of Guarantee.** A clearing arrangement subject to a Letter of Guarantee would immediately permit the Give Up of a Restricted OCC Number by the Member that is party to the arrangement.

(e) An intentional misuse of this Rule is impermissible, and may be treated as a violation of Rule 301.

(f) Notwithstanding anything to the contrary in this Rule, if a Clearing Member that a Member has indicated as the Give Up rejects a trade, the Clearing Member that has issued a Letter of Guarantee pursuant to Rule 209, for such executing Member, shall be responsible for the clearance of the subject trade.

Interpretations and Policies:

.01 Nothing herein shall be deemed to preclude the clearance of Exchange Transactions by a non-Member pursuant to the Bylaws of the Clearing Corporation so long as a Clearing Member is also designated as having responsibility under these Rules for the clearance and comparison of such transactions.

[Adopted: December 13, 2016; amended March 11, 2019 (SR-PEARL-2019-04)]

Rule 508. Unit of Trading

The unit of trading in each series of options traded on the Exchange shall be the unit of trading established for that series by the Clearing Corporation pursuant to the Rules of the Clearing Corporation and the agreements of the Exchange with the Clearing Corporation.

[Adopted: December 13, 2016]

Rule 509. Meaning of Premium Bids and Offers

(a) **General.** Except as provided in paragraph (b), bids and offers shall be expressed in terms of dollars per unit of the underlying security. (e.g., a bid of "7" shall represent a bid of $700 for an option contract having a unit of trading consisting of 100 shares of an underlying security, or a bid of $770 for an option contract having a unit of trading consisting of 110 shares of an underlying security.)

(b) **Special Cases.** Bids and offers for an option contract for which an adjusted unit of trading has been established in accordance with Rule 405 shall be expressed in terms of dollars per .01 part of the total securities and/or other property constituting such adjusted unit of trading. (e.g., an offer of "6" shall represent an offer of $600 on an option contract having a unit of trading consisting of 100 shares of an underlying security plus 10 rights.)

(c) **Mini-options**. Bids and offers for an option contract overlying 10 shares shall be expressed in terms of dollars per 1/10th part of the total value of the contract. An offer of ".50" shall represent an offer of $5.00 for an option contract having a unit of trading consisting of 10 shares.

[Adopted: December 13, 2016]

Rule 510. Minimum Price Variations and Minimum Trading Increments *(See below for amended Rule 510 which will become operative on June 29, 2019.)*

(a) **Minimum Price Variations.** The Board may establish Minimum Price Variations ("MPV") for options traded on the Exchange. Until such time as the Board makes a change in the variations, the following principles shall apply:

(1) If the option contract is trading at less than $3.00 per option, $.05.

(2) If the option contract is trading at $3.00 per option or higher, $.10.

(b) **Minimum Trading Increments.** Minimum Trading Increments for dealings in option contracts will be the Minimum Price Variations specified in paragraph (a).

Interpretations and Policies:

.01 Notwithstanding any other provision of this Rule 510, the Exchange will operate a pilot program, scheduled to expire on June 30, 2019, to permit options classes to be quoted and traded in increments as low as $.01. The Exchange will specify which options trade in such pilot, and in what increments, in Listings Alerts distributed to Members and posted on the Exchange's website. The Exchange may replace any pilot classes that have been delisted with the next most actively traded multiply listed options classes that are not yet included in the pilot program, based on trading activity in the previous six months. The replacement classes may be added to the penny pilot on the second trading day in the first month of each quarter.

.02 The minimum price variation for bids and offers for mini-options shall be determined in accordance with Interpretation and Policy .08(d) to Rule 404.

[Adopted: December 13, 2016; amended January 12, 2017 (SR-PEARL-2016-1); amended June 15, 2017 (SR-PEARL-2017-24); amended December 11, 2017 (SR-PEARL-2017-39); amended June 18, 2018 (SR-PEARL-2018-14); amended December 13, 2018 (SR-PEARL-2018-26); amended March 22, 2019 (SR-PEARL-2019-11)]

The following Rule will become operative on June 29, 2019.

Rule 510. Minimum Price Variations and Minimum Trading Increments

*(a) **Minimum Price Variations.** The Board may establish Minimum Price Variations ("MPV") for options traded on the Exchange. Until such time as the Board makes a change in the variations, the following principles shall apply:*

(1) If the option contract is trading at less than $3.00 per option, $.05.

(2) If the option contract is trading at $3.00 per option or higher, $.10.

*(b) **Minimum Trading Increments.** Minimum Trading Increments for dealings in option contracts will be the Minimum Price Variations specified in paragraph (a).*

Interpretations and Policies:

.01 Notwithstanding any other provision of this Rule 510, the Exchange will operate a pilot program, scheduled to expire on December 31, 2019, to permit options classes to be quoted and traded in increments as low as $.01. The Exchange will specify which options trade in such pilot, and in what increments, in Listings Alerts distributed to Members and posted on the Exchange's website. The Exchange may replace any pilot classes that have been delisted with the next most actively traded multiply listed options classes that are not yet included in the pilot program, based on trading activity in the previous six months. The replacement classes may be added to the penny pilot on the second trading day in the first month of each quarter.

.02 The minimum price variation for bids and offers for mini-options shall be determined in accordance with Interpretation and Policy .08(d) to Rule 404.

[Adopted: December 13, 2016; amended January 12, 2017 (SR-PEARL-2016-1); amended June 15, 2017 (SR-PEARL-2017-24); amended December 11, 2017 (SR-PEARL-2017-39); amended June 18, 2018 (SR-PEARL-2018-14); amended December 13, 2018 (SR-PEARL-2018-26); amended March 22, 2019 (SR-PEARL-2019-11); amended June 29, 2019 (SR-PEARL-2019-20)]

Rule 511. Acceptance of Quotes and Orders

All bids or offers made and accepted on the Exchange in accordance with the Rules shall constitute binding contracts, subject to applicable requirements of the Rules and the Rules of the Clearing Corporation.

[Adopted: December 13, 2016]

Rule 512. [Reserved]

Rule 513. Submission of Orders and Clearance of Transactions

(a) **Order Identification**. When entering orders on the Exchange, each Member shall submit trade information in such form as may be prescribed by the Exchange in order to allow the Exchange to properly prioritize and match bids and offers pursuant to Rule 514 and report resulting transactions to the Clearing Corporation.

(b) **Clearance of Transactions.**

(1) All transactions made on the Exchange shall be submitted for clearance to the Clearing Corporation, and all such transactions shall be subject to the Rules of the Clearing Corporation. Every Clearing Member shall be responsible for the clearance of the Exchange Transactions of such Clearing Member and of each Member who gives up such Clearing Member's name pursuant to a letter of authorization, letter of guarantee or other authorization given by such Clearing Member to such Member, which authorization must be submitted to the Exchange. This Rule will apply to all Clearing Members who either (i) have Restricted OCC Numbers with Authorized Members pursuant to Rule 507, or (ii) have non-Restricted OCC Numbers.

(2) On each business day at or prior to such time as may be prescribed by the Clearing Corporation, the Exchange shall furnish the Clearing Corporation a report of each Clearing Member's matched trades.

[Adopted: December 13, 2016; amended March 11, 2019 (SR-PEARL-2019-04)]

Rule 514. Priority on the Exchange

(a) **General.** The highest bid and lowest offer shall have priority on the Exchange.

(b) **Price-Time Allocation.** The System shall execute trading interest within the System in price-time priority, meaning it will execute all trading interest at the best price level within the System before executing trading interest at the next best price. Within each price level, if there are two or more orders at the best price, trading interest will be executed in time priority.

(c) **Self-Trade Protection.**

(1) Orders entered by a Market Maker via the MEO Interface or the FIX Interface will not be executed against orders entered on the opposite side of the market by (i) a Market Maker of the same firm, or alternatively, if selected by the Member, (ii) a Market Maker with the same MPID. In either case, the System will cancel the oldest of the orders back to the entering party prior to execution.

(2) If requested by an EEM, orders entered by an EEM via the MEO Interface using the same MPID will not be executed against orders entered on the opposite side of the market by the same EEM using the same MPID via the MEO Interface. In such a case, the System will cancel the oldest of the orders back to the entering party prior to execution.

[Adopted: December 13, 2016; amended August 31, 2018 (SR-PEARL-2018-15)]

Rule 515. Execution of Orders *(See below for amended Rule 515 which will become operative on June 21, 2019.)*

(a) **General.** Incoming orders and orders reevaluated pursuant to Rule 515 that are executable against orders in the System will be executed by the System in accordance with the following provisions, provided such orders will not be executed at prices inferior to the NBBO (as defined in Rules 100 and 1400(j)). Orders that could not be executed because the executions would be at prices inferior to the NBBO will be handled in accordance with the Managed Interest Process described in paragraph (d) below.

Post-Only Orders (as defined in Rule 516(j)) are evaluated with respect to locking or crossing other orders as follows: (i) if a Post-Only Order would lock or cross the current opposite side PBBO where the PBBO is the NBBO (the Post-Only Order locks or crosses an order on the System), the order will be handled pursuant to the Post-Only Price Process under Rule 515(g); or (ii) if a Post-Only Order would not lock or cross an order on the System but would lock or cross the ABBO where the PBBO is inferior to the ABBO, the order will be handled pursuant to the Managed Interest Process under Rule 515(d)(2). The handling of a Post-Only Order may move from one process to the other (i.e., a Post-Only Order initially handled under the Post-Only Price Process may upon reevaluation be handled under the Managed Interest Process if the PBBO changes and the Post-Only Order no longer locks or crosses an order on the System but locks or crosses the ABBO).

(b) **Order Locks or Crosses the NBBO and the PBBO is at the NBBO.** If the PBBO is at the NBBO, upon receipt of an order which locks or crosses the NBBO (other than a Post-Only Order which is handled pursuant to the Post-Only Price Process under paragraph (g) below), the System will immediately execute the new incoming order against the PBBO at or better than the PBBO price for a size which is the lesser of (1) the new incoming order; or (2) the PBBO size.

(c) **Price Protection on Orders.** The System will apply the following price protection process to all orders. Price protection prevents an order from being executed beyond the price designated in the order's price protection instructions (the "price protection limit"). The price protection instructions will be expressed in units of MPV away from (1) the NBBO at the time of the order's receipt, or the PBBO if the ABBO is crossing the PBBO or (2) the Opening Price (as defined in Rule 503(b)(2)) in the event that a New Opening Order (defined below) not traded

during the Opening Process (as defined in Rule 503(b)(1)) is priced through the Opening Price. A New Opening Order is an order received prior to the opening, excluding any order remaining from the prior day's close or from before a trading halt. Market participants may designate price protection instructions on an order by order basis within a minimum and maximum number of MPVs away from (1) the NBBO at the time of receipt, or the PBBO if the ABBO is crossing the PBBO, or (2) the Opening Price for New Opening Orders, as determined by the Exchange and announced to Members through a Regulatory Circular. The default price protection instruction will be within one (1) to five (5) MPVs away from (1) the NBBO at the time of receipt, or the PBBO if the ABBO is crossing the PBBO, or (2) the Opening Price for New Opening Orders, as determined by the Exchange and announced to Members through a Regulatory Circular. When triggered, the price protection process will cancel an order or the remaining contracts of an order. The System will not execute such orders at prices inferior to the current NBBO. The price protection process set forth in this subsection (c) will not apply to (i) orders received prior to the opening that are not priced through the Opening Price; or (ii) orders that remain on the Book from a prior trading session. Further, the price protection process set forth in this subsection (c) will not apply to Intermarket Sweep Orders ("ISOs") which will be handled in accordance with paragraph (f) below.

(d) **Orders That Could Not Be Executed or Could Not Be Executed in Full at the Original NBBO Upon Receipt.** An incoming order that could not be executed or could not be executed in full at the original NBBO upon receipt will be handled in accordance with the following provisions. In addition, orders that are reevaluated by the System for execution pursuant to an order's price protection instructions that could not be executed or could not be executed in full at the NBBO at the time of reevaluation will be handled in accordance with the following provisions. The following paragraphs will apply to orders both (i) upon receipt by the System, and (ii) upon reevaluation by the System for execution and according to the price protections designated on the order. The term "initiating order" will be used in the following paragraphs to refer to (i) the incoming order that could not be executed, (ii) the order reevaluated by the System for execution that could not be executed, or (iii) the remaining contracts of the incoming order or reevaluated order that could not be executed in full. The term "original NBBO" will be used in the following paragraphs to refer to the NBBO that existed at time of receipt of the initiating order or the NBBO at time of reevaluation of an order pursuant to Rule 515.

(1) **Orders Eligible for Routing**. The System will seek to trade the initiating order to the extent possible at MIAX PEARL and route an Eligible Order (as defined in Rule 529) to the ABBO until the first of: (i) the order is fully executed; (ii) the order has traded or routed to and including its price protection limit, at which time any remaining contracts will be canceled; or (iii) the order has traded or routed to and including its limit price, at which time the System will display and book the initiating order at its limit price and will reevaluate the order for execution pursuant to this Rule 515. The System will not execute such orders at prices inferior to the current NBBO. The System will handle any routing of the order in accordance with the order routing provisions set forth in Rule 529.

(2) **Managed Interest Process for Non-Routable Orders**.

(i) If the initiating order is non-routable (for example, the Public Customer order was marked "Do Not Route" or the order was a Post-Only Order being handled under this subsection (d)(2)) the order will never be routed outside of the Exchange regardless of prices displayed by away markets. A non-routable initiating order may execute on the Exchange at a price equal to or better than, but not inferior to, the ABBO. The System will not execute such orders at prices inferior to the current NBBO. The System will seek to trade an initiating order or a resting Post-Only Order until the first of: (A) the order is fully executed; (B) the order has traded to and including its price protection limit at which time any remaining contracts are canceled; or (C) the order has traded to and including its limit price at which time the System will attempt to display and book the initiating order at its limit price and will reevaluate the order for execution pursuant to this Rule 515.

(ii) If the limit price of an order locks or crosses the current opposite side NBBO and the PBBO is inferior to the NBBO, the System will display the order one MPV away from the current opposite side NBBO, and book the order at a price that will lock the current opposite side NBBO. Should the NBBO price change to an inferior price level, the order's Book price will continuously re-price to lock the new NBBO and the managed order's displayed price will continuously re-price one MPV away from the new NBBO until (A) the order has traded to and

including its limit price, (B) the order has traded to and including its price protection limit at which time any remaining contracts are cancelled, (C) the order is fully executed or (D) the order is cancelled.

(iii) (A) If the Exchange receives a new order or quote on the opposite side of the market from the managed order that can be executed, the System will immediately execute the remaining contracts from the initiating order to the extent possible at the order's current Book price, provided that the execution price does not violate the current NBBO.

(B) If the Exchange receives a new Post-Only Order on the opposite side of the market from an order being managed under this subsection (d)(2) which is not a Post-Only Order and the new Post-Only Order locks or crosses the Book price of the resting order, the Exchange will reject the new Post-Only Order.

(C) If the Exchange receives a new Post-Only Order on the opposite side of the market from a Post-Only Order being managed under this subsection (d)(2) and the new Post-Only Order locks or crosses the Book price of the resting Post-Only Order, the Exchange will re-book the resting Post-Only Order at the same price as its displayed price and manage the resting Post-Only Order and the new Post-Only Order under the POP Process of subsection (g) of this Rule 515.

(D) If unexecuted contracts remain from the initiating order, the order's size will be revised and the PBBO disseminated to reflect the order's remaining contracts.

(iv) An order subject to the Managed Interest Process under this subsection (d)(2) will retain its original limit price irrespective of the prices at which such order is booked and displayed and will maintain its original timestamp, provided however each time the order is booked and displayed at a more aggressive Book price, the order will receive a new timestamp. All orders that are re-booked and re-displayed pursuant to the Managed Interest Process will retain their priority as compared to other orders subject to the Managed Interest Process, based upon the time such order was initially received by the Exchange. Following the initial booking and display of an order subject to the Managed Interest Process, an order will only be re-booked and re-displayed to the extent it achieves a more aggressive price, provided, however, that the Exchange will re-book an order at the same price as the displayed price in the event such order's displayed price is locked or crossed by the ABBO. Such event will not result in a change in priority for the order at its displayed price.

(v) The Booked and displayed prices of an order subject to the Managed Interest Process may be adjusted once or multiple times depending on changes to the prevailing ABBO.

(e) **Handling of Immediate-or-Cancel ("IOC") Orders.** As defined in Rule 516(e), an IOC order is a limit order that is to be executed in whole or in part upon receipt, with any portion not so executed cancelled. Market participants may designate price protection instructions on an order by order basis for IOC orders in the manner described in paragraph (c) above. If an IOC order is executable against orders in the System and MIAX PEARL is the only exchange at the NBBO when an IOC order is received by the System, the System will execute the IOC order at the NBBO price or better and if the IOC order could not be executed in full the System may also execute the IOC order's remaining contracts at multiple prices not to exceed the IOC order's limit price or the order's price protection limit, provided the execution does not trade at a price inferior to the current ABBO. If other exchanges in addition to MIAX PEARL are also at the NBBO when the IOC order is received, the System will execute the IOC order at the NBBO price and cancel any remaining unexecuted contracts from the IOC order. If the PBBO is not at the NBBO at the time the IOC order is received or the IOC order is not executable against any orders in the System, the IOC order will be immediately cancelled.

(f) **Handling of Intermarket Sweep Orders ("ISOs").** As defined in Rule 516(f), ISOs are immediately executable in the System and are not eligible for routing to another exchange. As noted above, ISOs will not be handled in accordance with the price protection processes set forth in paragraph (c) above. The System will execute an ISO at multiple prices until (i) the ISO has been exhausted or its order has been completely filled; or (ii) the executions have reached the ISO's limit order price, whichever occurs first. Unexecuted contracts remaining from an ISO will be immediately cancelled.

(g) **Post-Only Price Process.**

(1) **General**. Post-Only Orders are defined in Rule 516(j). The following paragraphs will apply to a Post-Only Order where the limit price of a Post-Only Order locks or crosses the current opposite side PBBO where the PBBO is the NBBO (the Post-Only Order locks or crosses an order on the System) both (i) upon receipt by the System, and (ii) upon reevaluation by the System. A Post-Only Order will never route to another exchange.

(2) **Price Protection for Post-Only Orders**. The System will apply price protection to all Post-Only /Orders being handled under subsection (g) in accordance with subsection (c) above.

(3) **Post-Only Price Process.**

(i) A Post-Only Order subject to the process set forth in this subsection (g) (the "POP Process") may execute on the Exchange at a price equal to or better than, but not inferior to, the ABBO. The System will not execute a Post-Only Order at prices inferior to the current NBBO. The System will seek to trade the resting Post-Only Order until the first of: (A) the Post-Only Order is fully executed; (B) the Post-Only Order has traded to and including its price protection limit at which time any remaining contracts are canceled; or (C) the Post-Only Order has traded to and including its limit price at which time the System will attempt to display and book the initiating order at its limit price and will reevaluate the order for execution pursuant to this Rule 515.

(ii) If the limit price of a Post-Only Order locks or crosses the current opposite side PBBO where the PBBO is the NBBO (the Post-Only Order locks or crosses an order on the System), the Order will be handled in accordance with the POP Process set forth in this subsection (g) and the System will display and book the Post-Only Order one MPV away from the current opposite side PBBO. Should the PBBO price change to an inferior price level, the Post-Only Order's Book price and displayed price will continuously re-price to one MPV away from new PBBO until (A) the Post-Only Order has traded to and including its limit price, (B) the Post-Only Order has traded to and including its price protection limit at which time any remaining contracts are cancelled, (C) the Post-Only Order is fully executed or (D) the Post-Only Order is cancelled.

(iii) (A) If the Exchange receives a new order or quote on the opposite side of the market from the Post-Only Order that can be executed, the System will immediately execute the remaining contracts from the resting Post-Only Order to the extent possible at the Post-Only Order's current Book price, provided that the execution price does not violate the current NBBO.

(B) If the Exchange receives a new Post-Only Order on the opposite side of the market from a Post-Only Order being managed under this subsection (g) which locks or crosses the Book price of the resting Post-Only Order, the Exchange will book and display the new Post-Only Order one MPV away from the current opposite side PBBO.

(C) If unexecuted contracts remain from the resting Post-Only Order, the Post-Only Order's size of the Post-Only Order will be revised and the PBBO disseminated to reflect the Post-Only Order's remaining contracts of the Post-Only Order.

(iv) A Post-Only Order subject to the POP Process under this subsection (g)(3) will retain its original limit price irrespective of the prices at which such Post-Only Order is booked and displayed and will maintain its original timestamp, provided however each time the order is booked and displayed at a more aggressive Book price, the order will receive a new timestamp. In the event the PBBO changes such that a Post-Only Order subject to the POP Process would be able to be booked and displayed at its actual limit price, the Post-Only Order will receive a new timestamp. All Post-Only Orders that are re-ranked and re-displayed pursuant to the POP Process will retain their priority as compared to other orders subject to the POP Process based upon the time such Post-Only Order was initially received by the Exchange. Following the initial ranking and display of a Post Only Order subject to the POP Process, a Post Only Order will only be re-ranked and re-displayed to the extent it achieves a more aggressive price, provided, however, that the Exchange will re-book a Post-Only Order at the same price as the displayed price in the

event such order's displayed price is locked or crossed by the PBBO. Such event will not result in a change in priority for the Post-Only Order at its displayed price.

(v) The Booked and displayed prices of a Post-Only Order subject to the POP Process may be adjusted once or multiple times depending on changes to the prevailing PBBO.

Interpretations and Policies:

.01 In the course of the Managed Interest Process for Non-Routable Orders as provided in subparagraph (d)(2), if managed interest becomes tradable at multiple price points on the Exchange due to the ABBO transitioning from a crossed state to an uncrossed state, the initial trade price will be the midpoint of the PBBO, rounded up to the nearest MPV if necessary unless that price would be outside the ABBO, in which case the midpoint of the PBBO will be rounded to the nearest MPV at or inside the ABBO if necessary. An imbalance of orders on the buy side or sell side may result in orders that are not executed in whole or in part. Such orders will be handled in time sequence, beginning with the order with the oldest time stamp and may, in whole or in part, be placed on the Book, cancelled, executed, or routed in accordance with Rule 529.

.02 Immediately following the commencement of a trading halt pursuant to Rule 504 and at the end of each trading session, the System will cancel an order which was managed under this Rule 515 where the order's price protection limit for a buy (sell) order is lower (higher) than the order's effective limit price. For purposes of this Rule 515, the effective limit price for: (i) a limit order will be the order's limit price (ii) a market order to buy will be the maximum price permitted by the Exchange's System; and (iii) a market order to sell will be the lowest MPV as established by Rule 510 (either $.01 for option classes quoted and traded in increments as low as $.01, or $.05 for option classes quoted and traded in increments as low as $.05).

[Adopted: December 13, 2016; amended February 6, 2017 (SR-PEARL-2017-05); amended April 3, 2017 (SR-PEARL-2017-11); amended May 18, 2017 (SR-PEARL-2017-22)]

The following Rule will become operative on June 21, 2019.

Rule 515. Execution of Orders

(a) ***General.*** *Incoming orders and orders reevaluated pursuant to Rule 515 that are executable against orders in the System will be executed by the System in accordance with the following provisions, provided such orders will not be executed at prices inferior to the NBBO (as defined in Rules 100 and 1400(j)). Orders that could not be executed because the executions would be at prices inferior to the NBBO will be handled in accordance with the Managed Interest Process described in paragraph (d) below.*

Post-Only Orders (as defined in Rule 516(j)) are evaluated with respect to locking or crossing other orders as follows: (i) if a Post-Only Order would lock or cross the current opposite side PBBO where the PBBO is the NBBO (the Post-Only Order locks or crosses an order on the System), the order will be handled pursuant to the Post-Only Price Process under Rule 515(g); or (ii) if a Post-Only Order would not lock or cross an order on the System but would lock or cross the ABBO where the PBBO is inferior to the ABBO, the order will be handled pursuant to the Managed Interest Process under Rule 515(d)(2). The handling of a Post-Only Order may move from one process to the other (i.e., a Post-Only Order initially handled under the Post-Only Price Process may upon reevaluation be handled under the Managed Interest Process if the PBBO changes and the Post-Only Order no longer locks or crosses an order on the System but locks or crosses the ABBO).

(b) ***Order Locks or Crosses the NBBO and the PBBO is at the NBBO.*** *If the PBBO is at the NBBO, upon receipt of an order which locks or crosses the NBBO (other than a Post-Only Order which is handled pursuant to the Post-Only Price Process under paragraph (g) below), the System will immediately execute the new incoming order against the PBBO at or better than the PBBO price for a size which is the lesser of (1) the new incoming order; or (2) the PBBO size.*

(c) ***Price Protection on Orders.*** *The System will apply the following price protection process to all orders. Price protection prevents an order from being executed beyond the price designated in the order's price protection instructions (the "price protection limit"). The price protection instructions will be expressed in units of MPV away from (1) the NBBO at the time of the order's receipt, or the PBBO if the ABBO is crossing the PBBO or (2) the Opening Price (as defined in Rule 503(b)(2)) in the event that a New Opening Order (defined below) not traded during the Opening Process (as defined in Rule 503(b)(1)) is priced through the Opening Price. A New Opening Order is an order received prior to the opening, excluding any order remaining from the prior day's close or from before a trading halt. Market participants may designate price protection instructions on an order by order basis within a minimum and maximum number of MPVs away from (1) the NBBO at the time of receipt, or the PBBO if the ABBO is crossing the PBBO, or (2) the Opening Price for New Opening Orders, as determined by the Exchange and announced to Members through a Regulatory Circular. The default price protection instruction will be within one (1) to five (5) MPVs away from (1) the NBBO at the time of receipt, or the PBBO if the ABBO is crossing the PBBO, or (2) the Opening Price for New Opening Orders, as determined by the Exchange and announced to Members through a Regulatory Circular. When triggered, the price protection process will cancel an order or the remaining contracts of an order. The System will not execute such orders at prices inferior to the current NBBO. The price protection process set forth in this subsection (c) will not apply to (i) orders received prior to the opening that are not priced through the Opening Price; or (ii) orders that remain on the Book from a prior trading session. Further, the price protection process set forth in this subsection (c) will not apply to Intermarket Sweep Orders ("ISOs") which will be handled in accordance with paragraph (f) below.*

(d) ***Orders That Could Not Be Executed or Could Not Be Executed in Full at the Original NBBO Upon Receipt.*** *An incoming order that could not be executed or could not be executed in full at the original NBBO upon receipt will be handled in accordance with the following provisions. In addition, orders that are reevaluated by the System for execution pursuant to an order's price protection instructions that could not be executed or could not be executed in full at the NBBO at the time of reevaluation will be handled in accordance with the following provisions. The following paragraphs will apply to orders both (i) upon receipt by the System, and (ii) upon reevaluation by the System for execution and according to the price protections designated on the order. The term "initiating order" will be used in the following paragraphs to refer to (i) the incoming order that could not be executed, (ii) the order reevaluated by the System for execution that could not be executed, or (iii) the remaining contracts of the incoming order or reevaluated order that could not be executed in full. The term "original NBBO" will be used in the following paragraphs to refer to the NBBO that existed at time of receipt of the initiating order or the NBBO at time of reevaluation of an order pursuant to Rule 515.*

(1) ***Orders Eligible for Routing.*** *The System will seek to trade the initiating order to the extent possible at MIAX PEARL and route an Eligible Order (as defined in Rule 529) to the ABBO until the first of: (i) the order is fully executed; (ii) the order has traded or routed to and including its price protection limit, at which time any remaining contracts will be canceled; or (iii) the order has traded or routed to and including its limit price, at which time the System will display and book the initiating order at its limit price and will reevaluate the order for execution pursuant to this Rule 515. The System will not execute such orders at prices inferior to the current NBBO. The System will handle any routing of the order in accordance with the order routing provisions set forth in Rule 529.*

(2) ***Managed Interest Process for Non-Routable Orders.***

(i) If the initiating order is non-routable (for example, the Public Customer order was marked "Do Not Route" or the order was a Post-Only Order being handled under this subsection (d)(2)) the order will never be routed outside of the Exchange regardless of prices displayed by away markets. A non-routable initiating order may execute on the Exchange at a price equal to or better than, but not inferior to, the ABBO. The System will not execute such orders at prices inferior to the current NBBO. The System will seek to trade an initiating order or a resting Post-Only Order until the first of: (A) the order is fully executed; (B) the order has traded to and including its price protection limit at which time any remaining contracts are canceled; or (C) the order has traded to and including its limit price at which time the System will attempt to display and book the initiating order at its limit price and will reevaluate the order for execution pursuant to this Rule 515.

(ii) If the limit price of an order locks or crosses the current opposite side NBBO and the PBBO is inferior to the NBBO, the System will display the order one MPV away from the current opposite side NBBO, and book the order at a price that will lock the current opposite side NBBO. Should the NBBO price change to an inferior price level, the order's Book price will continuously re-price to lock the new NBBO and the managed order's displayed price will continuously re-price one MPV away from the new NBBO until (A) the order has traded to and including its limit price, (B) the order has traded to and including its price protection limit at which time any remaining contracts are cancelled, (C) the order is fully executed or (D) the order is cancelled.

(iii) (A) If the Exchange receives a new order or quote on the opposite side of the market from the managed order that can be executed, the System will immediately execute the remaining contracts from the initiating order to the extent possible at the order's current Book price, provided that the execution price does not violate the current NBBO.

(B) If the Exchange receives a new Post-Only Order on the opposite side of the market from an order being managed under this subsection (d)(2) which is not a Post-Only Order and the new Post-Only Order locks or crosses the Book price of the resting order, the Exchange will reject the new Post-Only Order.

(C) If the Exchange receives a new Post-Only Order on the opposite side of the market from a Post-Only Order being managed under this subsection (d)(2) and the new Post-Only Order locks or crosses the Book price of the resting Post-Only Order, the Exchange will re-book the resting Post-Only Order at the same price as its displayed price and manage the resting Post-Only Order and the new Post-Only Order under the POP Process of subsection (g) of this Rule 515.

(D) If unexecuted contracts remain from the initiating order, the order's size will be revised and the PBBO disseminated to reflect the order's remaining contracts.

(iv) An order subject to the Managed Interest Process under this subsection (d)(2) will retain its original limit price irrespective of the prices at which such order is booked and displayed and will maintain its original timestamp. All orders that are re-booked and re-displayed pursuant to the Managed Interest Process will retain their priority as compared to other orders subject to the Managed Interest Process, based upon the time such order was initially received by the Exchange. Following the initial booking and display of an order subject to the Managed Interest Process, an order will only be re-booked and re-displayed to the extent it achieves a more aggressive price, provided, however, that the Exchange will re-book an order at the same price as the displayed price in the event such order's displayed price is locked or crossed by the ABBO. Such event will not result in a change in priority for the order at its displayed price.

(v) The Booked and displayed prices of an order subject to the Managed Interest Process may be adjusted once or multiple times depending on changes to the prevailing ABBO.

(e) ***Handling of Immediate-or-Cancel ("IOC") Orders.*** *As defined in Rule 516(e), an IOC order is a limit order that is to be executed in whole or in part upon receipt, with any portion not so executed cancelled. Market participants may designate price protection instructions on an order by order basis for IOC orders in the manner described in paragraph (c) above. If an IOC order is executable against orders in the System and MIAX PEARL is the only exchange at the NBBO when an IOC order is received by the System, the System will execute the IOC order at the NBBO price or better and if the IOC order could not be executed in full the System may also execute the IOC order's remaining contracts at multiple prices not to exceed the IOC order's limit price or the order's price protection limit, provided the execution does not trade at a price inferior to the current ABBO. If other exchanges in addition to MIAX PEARL are also at the NBBO when the IOC order is received, the System will execute the IOC order at the NBBO price and cancel any remaining unexecuted contracts from the IOC order. If the PBBO is not at the NBBO at the time the IOC order is received or the IOC order is not executable against any orders in the System, the IOC order will be immediately cancelled.*

(f) ***Handling of Intermarket Sweep Orders ("ISOs").*** *As defined in Rule 516(f), ISOs are immediately executable in the System and are not eligible for routing to another exchange. As noted above, ISOs will not be handled in*

accordance with the price protection processes set forth in paragraph (c) above. The System will execute an ISO at multiple prices until (i) the ISO has been exhausted or its order has been completely filled; or (ii) the executions have reached the ISO's limit order price, whichever occurs first. Unexecuted contracts remaining from an ISO will be immediately cancelled.

(g) ***Post-Only Price Process.***

(1) ***General.*** *Post-Only Orders are defined in Rule 516(j). The following paragraphs will apply to a Post-Only Order where the limit price of a Post-Only Order locks or crosses the current opposite side PBBO where the PBBO is the NBBO (the Post-Only Order locks or crosses an order on the System) both (i) upon receipt by the System, and (ii) upon reevaluation by the System. A Post-Only Order will never route to another exchange.*

(2) ***Price Protection for Post-Only Orders.*** *The System will apply price protection to all Post-Only /Orders being handled under subsection (g) in accordance with subsection (c) above.*

(3) ***Post-Only Price Process.***

(i) A Post-Only Order subject to the process set forth in this subsection (g) (the "POP Process") may execute on the Exchange at a price equal to or better than, but not inferior to, the ABBO. The System will not execute a Post-Only Order at prices inferior to the current NBBO. The System will seek to trade the resting Post-Only Order until the first of: (A) the Post-Only Order is fully executed; (B) the Post-Only Order has traded to and including its price protection limit at which time any remaining contracts are canceled; or (C) the Post-Only Order has traded to and including its limit price at which time the System will attempt to display and book the initiating order at its limit price and will reevaluate the order for execution pursuant to this Rule 515.

(ii) If the limit price of a Post-Only Order locks or crosses the current opposite side PBBO where the PBBO is the NBBO (the Post-Only Order locks or crosses an order on the System), the Order will be handled in accordance with the POP Process set forth in this subsection (g) and the System will display and book the Post-Only Order one MPV away from the current opposite side PBBO. Should the PBBO price change to an inferior price level, the Post-Only Order's Book price and displayed price will continuously re-price to one MPV away from new PBBO until (A) the Post-Only Order has traded to and including its limit price, (B) the Post-Only Order has traded to and including its price protection limit at which time any remaining contracts are cancelled, (C) the Post-Only Order is fully executed or (D) the Post-Only Order is cancelled.

(iii) (A) If the Exchange receives a new order or quote on the opposite side of the market from the Post-Only Order that can be executed, the System will immediately execute the remaining contracts from the resting Post-Only Order to the extent possible at the Post-Only Order's current Book price, provided that the execution price does not violate the current NBBO.

(B) If the Exchange receives a new Post-Only Order on the opposite side of the market from a Post-Only Order being managed under this subsection (g) which locks or crosses the Book price of the resting Post-Only Order, the Exchange will book and display the new Post-Only Order one MPV away from the current opposite side PBBO.

(C) If unexecuted contracts remain from the resting Post-Only Order, the Post-Only Order's size of the Post-Only Order will be revised and the PBBO disseminated to reflect the Post-Only Order's remaining contracts of the Post-Only Order.

(iv) A Post-Only Order subject to the POP Process under this subsection (g)(3) will retain its original limit price irrespective of the prices at which such Post-Only Order is booked and displayed and will maintain its original timestamp, provided however each time the order is booked and displayed at a more aggressive Book price, the order will receive a new timestamp. In the event the PBBO changes such that a Post-Only Order subject to the POP Process would be able to be booked and displayed at its actual limit price, the Post-Only Order will receive a new timestamp. All Post-Only Orders that are re-ranked and re-displayed pursuant to the POP Process

will retain their priority as compared to other orders subject to the POP Process based upon the time such Post-Only Order was initially received by the Exchange. Following the initial ranking and display of a Post Only Order subject to the POP Process, a Post Only Order will only be re-ranked and re-displayed to the extent it achieves a more aggressive price, provided, however, that the Exchange will re-book a Post-Only Order at the same price as the displayed price in the event such order's displayed price is locked or crossed by the PBBO. Such event will not result in a change in priority for the Post-Only Order at its displayed price.

(v) The Booked and displayed prices of a Post-Only Order subject to the POP Process may be adjusted once or multiple times depending on changes to the prevailing PBBO.

Interpretations and Policies:

.01 In the course of the Managed Interest Process for Non-Routable Orders as provided in subparagraph (d)(2), if managed interest becomes tradable at multiple price points on the Exchange due to the ABBO transitioning from a crossed state to an uncrossed state, the initial trade price will be the midpoint of the PBBO, rounded up to the nearest MPV if necessary unless that price would be outside the ABBO, in which case the midpoint of the PBBO will be rounded to the nearest MPV at or inside the ABBO if necessary. An imbalance of orders on the buy side or sell side may result in orders that are not executed in whole or in part. Such orders will be handled in time sequence, beginning with the order with the oldest time stamp and may, in whole or in part, be placed on the Book, cancelled, executed, or routed in accordance with Rule 529.

.02 Immediately following the commencement of a trading halt pursuant to Rule 504 and at the end of each trading session, the System will cancel an order which was managed under this Rule 515 where the order's price protection limit for a buy (sell) order is lower (higher) than the order's effective limit price. For purposes of this Rule 515, the effective limit price for: (i) a limit order will be the order's limit price (ii) a market order to buy will be the maximum price permitted by the Exchange's System; and (iii) a market order to sell will be the lowest MPV as established by Rule 510 (either $.01 for option classes quoted and traded in increments as low as $.01, or $.05 for option classes quoted and traded in increments as low as $.05).

[Adopted: December 13, 2016; amended February 6, 2017 (SR-PEARL-2017-05); amended April 3, 2017 (SR-PEARL-2017-11); amended May 18, 2017 (SR-PEARL-2017-22); amended June 21, 2019 (SR-PEARL-2019-19)]

Rule 516. Order Types

It should be noted that some of the order types defined below are valid only during certain portions of the trading day (e.g., after the opening). If a Member submits an order type during a time period when the order type is not valid, the System will reject the order. It should also be noted that not all of the order types listed and described in this Rule will be available for use on each of the MEO Interface and the FIX Interface. The Exchange will issue a Regulatory Circular listing which order types, among the order types set forth below, are available for delivery via the MEO Interface and which are available for delivery via the FIX Interface.

(a) **Market Order.** A market order is an order to buy or sell a stated number of option contracts at the best price available at the time of execution. A Market Maker may not submit a market order.

(b) **Limit Orders**. A limit order is an order to buy or sell a stated number of option contracts at a specified price or better.

(c) **Marketable Limit Orders.** A marketable limit order is a limit order to buy (sell) at or above (below) the best offer (bid) on the Exchange.

(d) **Cancel-Replacement Order**. A Cancel-replacement order is a single message for the immediate cancellation of a previously received order and the replacement of that order with a new order with new terms and conditions. The replacement order will not retain the priority of the cancelled order except when the replacement order reduces the open size of the order and all other terms and conditions are retained.

(e) **Immediate-or-Cancel Orders.** An immediate-or-cancel order is an order that is to be executed in whole or in part upon receipt. Any portion not so executed is cancelled. An immediate-or-cancel order is not valid during the Opening Process described in Rule 503.

(f) **Intermarket Sweep Order.** An Intermarket Sweep Order or "ISO", as defined in Rule 1400(h), is a limit order that is designated by a Member as an ISO in the manner prescribed by the Exchange, and is executed within the System by Members without respect to Protected Quotations of other Eligible Exchanges as defined in Rule 1400(p) and (f). ISOs are immediately executable within the System and shall not be eligible for routing. ISOs that are not designated as immediate or cancel will be cancelled by the System if not executed upon receipt. Simultaneously with the routing of an ISO to the System, one or more additional limit orders, as necessary, are routed by the entering Member to execute against the full displayed size of any Protected Bid or Protected Offer (as defined in Rule 1400(o)) in the case of a limit order to sell or buy with a price that is superior to the limit price of the limit order identified as an ISO. These additional routed orders must be identified as ISOs. An ISO is not valid during the Opening Process described in Rule 503.

(g) **Do Not Route Order.** A Do Not Route or "DNR" order is an order that will never be routed outside of the Exchange regardless of the prices displayed by away markets. A DNR order may execute on the Exchange at a price equal to or better than, but not inferior to, the best away market price but, if that best away market remains, the DNR order will be handled in accordance with the Managed Interest Process described in Rule 515(d)(2).

(h) **Day Limit Order.** A Day Limit Order is an order to buy or sell which, if not executed, expires at the end of trading in the security on the day on which it was entered.

(i) **Good 'Til Cancelled Order.** A Good 'til Cancelled or "GTC" Order is an order to buy or sell which remains in effect until it is either executed, cancelled or the underlying option expires.

(j) **"Post-Only Orders"** are orders that will not remove liquidity from the Book. Post-Only Orders are to be ranked and executed on the Exchange pursuant to Rule 514 (Priority on the Exchange), or handled pursuant to Rule 515, as appropriate, and will never route away to another trading center. Post-Only Orders are evaluated with respect to locking or crossing other orders as follows: (i) if a Post-Only Order would lock or cross an order on the System, the order will be handled pursuant to the Post-Only Price Process under Rule 515(g); or (ii) if a Post-Only Order would not lock or cross an order on the System but would lock or cross the ABBO where the PBBO is inferior to the ABBO, the order will be handled pursuant to the Managed Interest Process under Rule 515(d). The handling of a Post-Only Order may move from one process to the other (i.e., a Post-Only Order initially handled under the Post-Only Price Process may upon reevaluation be handled under the Managed Interest Process if the PBBO changes and the Post-Only Order no longer locks or crosses an order on the System but locks or crosses the ABBO). A Post-Only Order is valid during the Opening Process and will be processed in accordance with Rule 503. The Post-Only instruction will be ignored for Post-Only Orders that participate in the Opening Process. A Post-Only Order may not be a market order, Immediate-or-Cancel Order, an Intermarket Sweep Order or a Good 'til Cancelled Order. Post-Only Orders received before the Opening Process or during a trading halt may participate in the next Opening Process. Post-Only Orders received after the market close will be rejected.

[Adopted: December 13, 2016; amended May 3, 2017 (SR-PEARL-2017-16)]

Rule 517A. Aggregate Risk Manager for EEMs ("ARM-E")

(a) **EEM Counting Program.** The System will maintain a counting program ("EEM Counting Program") for each participating EEM who has submitted an order in an EEM Specified Option Class using a specified MPID of the EEM and delivered via the MEO Interface as described herein (an "EEM ARM Eligible Order"). The EEM Counting Program will count the number of contracts executed by an EEM from an EEM ARM Eligible Order (the "EEM ARM Contracts") within a specified time period that has been established by the EEM (the "EEM Specified Time Period"). An "EEM Specified Option Class" is a class in which the EEM has designated as a class to be protected via ARM-E. The EEM Specified Time Period cannot exceed 15 seconds. The EEM may also establish for each

EEM Specified Option Class an EEM Allowable Engagement Percentage. When an execution of an EEM ARM Contract from an EEM ARM Eligible Order occurs, the System will look back over the EEM Specified Time Period to determine whether the sum of contract executions from such EEM ARM Eligible Order during such EEM Specified Time Period triggers the ARM-E.

(b) **EEM Risk Manager.** The System will engage the Aggregate Risk Manager for EEMs ("ARM-E") in a particular EEM Specified Option Class when the EEM Counting Program has determined that an EEM has executed during the EEM Specified Time Period a number of EEM ARM Contracts from an EEM ARM Eligible Order equal to or above their EEM Allowable Engagement Percentage. ARM-E will then, until the EEM sends a notification to the System of the intent to reengage and submits a new order in the EEM Specified Option Class: (i) automatically cancel the EEM ARM Eligible Orders in all series of that particular EEM Specified Option Class and (ii) reject new EEM ARM Eligible Orders by the EEM in all series of that particular EEM Specified Option Class submitted using the MEO Interface.

(c) **EEM Allowable Engagement Percentage.** To determine whether the EEM's executed contracts from an EEM ARM Eligible Order is equal to or above their EEM Allowable Engagement Percentage the following will occur:

(1) for each execution of a contract from an EEM ARM Eligible Order in an EEM Specified Option Class, the EEM Counting Program will determine the percentage that the number of contracts executed in that trade represents relative to the original size of the EEM ARM Eligible Order which was traded (the "EEM Trade Percentage"); and

(2) the EEM Counting Program will add the individual EEM Trade Percentages in the EEM Specified Option Class to determine the realized engagement percentage by the EEM (the "EEM Realized Engagement Percentage"). When the EEM Realized Engagement Percentage equals or exceeds the EEM Allowable Engagement Percentage the ARM-E will cancel and reject the EEM ARM Eligible Orders in the EEM Specified Option Class as described above.

(d) All of an EEM's orders in each EEM Specified Option Class will be considered firm until such time as the EEM Allowable Engagement Percentage threshold has been equaled or crossed and the EEM ARM Eligible Orders are cancelled by the ARM-E in all series of that EEM Specified Option Class as described herein. Any marketable orders that are executable against EEM's orders that are received prior to the time the ARM-E is engaged will be automatically executed at the disseminated price up to the EEM's disseminated size, regardless of whether such an execution results in executions in excess of the EEM Allowable Engagement Percentage.

Interpretations and Policies:

.01 Immediate-or-Cancel ("IOC") orders submitted by an EEM using the MEO Interface are not EEM ARM Eligible Orders.

.02 **EEM Single Side Protection.** An EEM may determine to engage the EEM Single Side Protection ("SSP") feature for orders delivered via the MEO Interface by MPID. If the full remaining size of an EEM's order, in an individual option, is exhausted by a trade, the System will trigger the SSP. When triggered, the System will cancel all open orders and block all new inbound orders delivered via the MEO Interface, for that particular side of that individual option for that MPID. The System will provide a notification message to the EEM. The block will remain in effect until the EEM notifies the Exchange (in a manner required by the Exchange and communicated to EEMs by Regulatory Circular) to reset the SSP ("SSP Reset"). Intermarket Sweep Orders are not eligible for EEM Single Side Protection and are not canceled or blocked when the SSP is triggered.

[Adopted: December 13, 2016; amended April 5, 2017 (SR-PEARL-2017-12); amended December 29, 2017 (SR-PEARL-2017-37); amended February 6, 2018 (SR-PEARL-2018-01)]

Rule 517B. Aggregate Risk Manager for Market Makers ("ARM-M")

(a) **Market Maker Counting Program.** The System will maintain a counting program ("MM Counting Program") for each Market Maker who has submitted an order in an option class (an "MM Option Class") delivered via the MEO Interface as described herein (an "MM ARM Eligible Order"). The MM Counting Program will count the number of contracts executed by a Market Maker from an MM ARM Eligible Order (the "MM ARM Contracts") within a specified time period that has been established by the Market Maker or as a default setting, as defined below (the "MM Specified Time Period"). The MM Specified Time Period cannot exceed 15 seconds whether established by the Market Maker or as a default setting, as defined below. The Market Maker may also establish for each MM Option Class an MM Allowable Engagement Percentage. The Exchange will establish a default MM Specified Time Period and a default Allowable Engagement Percentage ("default settings") on behalf of a Market Maker that has not established an MM Specified Time Period and/or an MM Allowable Engagement Percentage. The default MM Allowable Engagement Percentage shall not be less than 100%. The default settings will be determined by the Exchange on an Exchange-wide basis and announced to Members via Regulatory Circular. When an execution of an MM ARM Contract from an MM ARM Eligible Order occurs, the System will look back over the MM Specified Time Period to determine whether the sum of contract executions from such MM ARM Eligible Order during such MM Specified Time Period triggers the ARM-M.

(b) **Market Maker Risk Manager.** The System will engage the Aggregate Risk Manager for Market Makers ("ARM-M") in a particular MM Option Class when the MM Counting Program has determined that a Market Maker has executed during the MM Specified Time Period a number of MM ARM Contracts from an MM ARM Eligible Order equal to or above their MM Allowable Engagement Percentage. ARM-M will then, until the Market Maker sends a notification to the System of the intent to reengage and submits a new order in the MM Option Class: (i) automatically cancel the MM ARM Eligible Orders in all series of that particular MM Option Class and (ii) reject new MM ARM Eligible Orders by the Market Maker in all series of that particular MM Option Class submitted using the MEO Interface.

(c) **Market Maker Allowable Engagement Percentage.** To determine whether the Market Maker's executed contracts from an MM ARM Eligible Order is equal to or above their MM Allowable Engagement Percentage the following will occur:

(1) for each execution of a contract from an MM ARM Eligible Order in an MM Option Class, the MM Counting Program will determine the percentage that the number of contracts executed in that trade represents relative to the original size of the MM ARM Eligible Order which was traded (the "MM Trade Percentage"); and

(2) the MM Counting Program will add the individual MM Trade Percentages in the MM Option Class to determine the realized engagement percentage by the Market Maker (the "MM Realized Engagement Percentage"). When the MM Realized Engagement Percentage equals or exceeds the MM Allowable Engagement Percentage the ARM-M will cancel and reject the MM ARM Eligible Orders in the MM Option Class as described above.

(d) All of a Market Maker's orders in each MM Option Class will be considered firm until such time as the MM Allowable Engagement Percentage threshold has been equaled or crossed and the MM ARM Eligible Orders are cancelled by the ARM-M in all series of that MM Option Class as described herein. Any marketable orders that are executable against Market Maker's orders that are received prior to the time the ARM-M is engaged will be automatically executed at the disseminated price up to the Market Maker's disseminated size, regardless of whether such an execution results in executions in excess of the MM Allowable Engagement Percentage.

Interpretations and Policies:

.01 **Enhanced Aggregate Risk Manager Protections.** Market Makers may determine to engage any of the following Enhanced Aggregate Risk Manager Protections in the System:

(a) **Protection for One Option Class ("ARM Class Protection").** A Market Maker may determine to engage the ARM Class Protection feature for a particular MM Option Class which has MM ARM Eligible Orders in a protected

MPID (an "ARM Option Class"). When an ARM Option Class in a protected MPID has been equaled or exceeded a specified number of times (not less than three times and not more than 99 times) within a specified time period (for purposes of the ARM Class Protection, the "ARM Trigger Counting Period") (each as determined by the Market Maker), the ARM Class Protection feature will cancel and reject the MM ARM Eligible Orders in such ARM Option Class from the protected MPID as described above until the Market Maker instructs the Exchange (in a manner required by the Exchange and communicated to Market Makers by Regulatory Circular) to reset the ARM Class Protection feature. The ARM Trigger Counting Period may not be less than one second and may not exceed 24,300 seconds.

(b) **Protection for More Than One Option Class ("ARM Firm Protection").** A Market Maker may determine to engage the ARM Firm Protection feature for more than one class of options which has MM Eligible ARM Orders and are traded via the MEO Interface under all of the MPIDs of such Market Maker's firm (the "Firm Protected ARM Option Classes"). The System will aggregate the specified number of times that the MM Allowable Engagement Percentage has been equaled or exceeded in a specified number of such Firm Protected ARM Option Classes within the ARM Trigger Counting Period. When the MM Allowable Engagement Percentage has been equaled or exceeded within the ARM Trigger Counting Period (each as determined by the Market Maker) in the defined number of Firm Protected ARM Option Classes, the ARM Firm Protection feature will cancel and reject all of the Firm Protected ARM Option Classes until the Market Maker instructs the Exchange (in a manner required by the Exchange and communicated to Market Makers by Regulatory Circular) to reset the ARM Firm Protection feature. In the event that the MM Allowable Engagement Percentage in one option class is equaled or exceeded multiple times during the applicable ARM Trigger Counting Period, the System will consider such multiple events to be one single trigger for purposes of engagement of the ARM Firm Protection feature.

(c) **Market Maker Single Side Protection.** A Market Maker may determine to engage the Market Maker Single Side Protection ("SSP") feature for orders delivered via the MEO Interface by MPID. If the full remaining size of a Market Maker's order in an individual option, is exhausted by a trade, the System will trigger the SSP. When triggered, the System will cancel all open orders and block all new inbound orders delivered via the MEO Interface, for that particular side of that individual option for that MPID. The System will provide a notification message to the Market Maker. The block will remain in effect until the Market Maker notifies the Exchange (in a manner required by the Exchange and communicated to Market Makers by Regulatory Circular) to reset the SSP ("SSP Reset"). Intermarket Sweep Orders are not eligible for Market Maker Single Side Protection and are not canceled or blocked when the SSP is triggered.

.02 Immediate-or-Cancel ("IOC") orders submitted by a Market Maker using the MEO Interface are not MM ARM Eligible Orders.

[Adopted: December 13, 2016; amended April 5, 2017 (SR-PEARL-2017-12); amended December 29, 2017 (SR-PEARL-2017-37); amended February 6, 2018 (SR-PEARL-2018-01)]

Rule 518. [Reserved]

Rule 519. MIAX PEARL Order Monitor ("MOM")

(a) **Order Price Protections**. In order to avoid the occurrence of potential obvious or catastrophic errors on the Exchange, the System will take the following steps in accordance with the MIAX PEARL Order Monitor, which will prevent certain orders from executing or being placed on the Book at prices outside pre-set standard limits. Beginning after the Opening Process is complete, the MIAX PEARL Order Monitor will be operational each trading day until the close of trading. The MIAX PEARL Order Monitor will not be operational during a trading halt.

(1) **Market Orders to Sell.**

(i) If the Exchange upon initial receipt or reevaluation evaluates a market order from an EEM to sell an option when the national best bid is zero and the Exchange's disseminated offer is equal to or less than $0.10, the System will convert the market order to sell to a limit order to sell with a limit price of one Minimum Trading

Increment. In this case, such sell orders will automatically be placed on the Book in time priority and will be displayed at the appropriate Minimum Price Variation.

(ii) If the Exchange upon initial receipt or reevaluation evaluates a market order from an EEM to sell an option when the national best bid is zero and the national best offer is greater than $0.10, the System will cancel the market order to sell.

(2) **Market Orders to Buy or Sell.**

(i) If the differential between the bid and the offer of the NBBO is equal to or greater than $5.00, market orders from an EEM to buy or sell will be rejected by the System upon receipt.

(ii) Notwithstanding the foregoing, certain options classes may be designated by the Exchange as Extended Market Width classes and as such will be exempt from subparagraph (a)(2)(i) above. A list of Extended Market Width classes will be made available to Members through the issuance of a Regulatory Circular.

(3) **Limit Orders to Buy.** For options with a National Best Offer ("NBO") greater than $0.50 the System will reject an incoming limit order from a Market Maker or an EEM that has a limit price equal to or greater than the NBO by the lesser of (i) $2.50, or (ii) 50% of the NBO price. For options with an NBO less than or equal to $0.50 the System will reject an incoming limit order from a Market Maker or an EEM that has a limit price that is equal to or greater than the NBO price by $0.25.

For example: (A) if the NBO is $12.00 an incoming limit order to buy options for $14.50 or more will be rejected; and (B) if the NBO is $0.10 an incoming limit order to buy options for $0.15 will be not rejected; whereas if the NBO is $0.10 an incoming limit order to buy options for $0.35 will be rejected as the limit price of the order is $0.25 greater than the NBO.

(4) **Limit Orders to Sell.** For options with a National Best Bid ("NBB") equal to or greater than $0.25 the System will reject an incoming limit order from a Market Maker or an EEM that has a limit price equal to or less than the NBB by the lesser of (i) $2.50, or (ii) 50% of the NBB price. For options with an NBB of $0.25 or less the System will accept any incoming limit order from a Market Maker or an EEM.

For example: (A) if the NBB is $12.00 an incoming limit order to sell options for $9.50 or less will be rejected, and (B) if the NBB is $0.30 an incoming limit order to sell options for $0.15 will be rejected; whereas if the NBB is $0.30 an incoming limit order to sell options for $0.20 will be not be rejected as the limit price of the order is not less than 50% of the NBB price.

(b) **Order Size Protections.** The System will prevent certain orders from executing or being placed on the Book if the size of the order exceeds the order size protection designated by an EEM. If the maximum size of orders is not designated by an EEM, the Exchange will set a maximum size of orders on behalf of an EEM by default. An EEM may designate the order size protection on a firm wide basis. The default maximum size of orders will be determined by the Exchange and announced to Members through a Regulatory Circular. The order size protections will apply separately to orders entered via the MEO Interface and the FIX Interface.

(c) **Open Order Protection.** The System will reject any orders that exceed the maximum number of open orders held in the System on behalf of a particular EEM, as designated by the EEM. EEMs may designate the open order protection on a firm wide basis. If the maximum number of open orders is not designated by the EEM, the Exchange will set a maximum number of open orders on behalf of the EEM by default. The default maximum number of open orders will be determined by the Exchange and announced to Members through a Regulatory Circular. The open order protections will apply separately to orders entered via the MEO Interface and the FIX Interface.

(d) **Open Contract Protection.** The System will reject any orders that exceed the maximum number of open contracts represented by orders held in the System on behalf of a particular EEM, as designated by the EEM. EEMs may designate the open contract protection on a firm wide basis. If the maximum number of open contracts is not

designated by the EEM, the Exchange will set a maximum number of open contracts on behalf of the EEM by default. The default maximum number of open contracts will be determined by the Exchange and announced to Members through a Regulatory Circular. The open contract protections will apply separately to orders entered via the MEO Interface and the FIX Interface.

Interpretations and Policies:

.01 For purposes of this Rule, in singly listed series the PBBO shall be deemed to be the NBBO.

.02 The order price protections of the MIAX PEARL Order Monitor pursuant to section (a) will not apply to incoming orders marked as Intermarket Sweep Orders (ISO).

[Adopted: December 13, 2016; amended January 11, 2019 (SR-PEARL-2018-25)]

Rule 519A. Risk Protection Monitor for Orders Entered via the FIX Interface ("RPM-FIX")

(a) **Voluntary Risk Protection Functionality**. The System will maintain a counting program ("counting program") for each participating Member that will count the number of orders entered and the number of contracts traded via an order entered by a Member on the Exchange via the FIX Interface within a specified time period that has been established by the Member (the "specified time period"). The maximum duration of the specified time period will be established by the Exchange and announced via a Regulatory Circular. The RPM-FIX Monitor maintains one or more Member-configurable FIX Interface Allowable Order Rate settings and FIX Interface Allowable Contract Execution Rate settings. When a Member's order is entered or when an execution of a Member's order occurs via the FIX Interface, the System will look back over the specified time period to determine if the Member has: (i) entered during the specified time period a number of orders exceeding their FIX Interface Allowable Order Rate setting(s), or (ii) executed during the specified time period a number of contracts exceeding their FIX Interface Allowable Contract Execution Rate setting(s). Once engaged, the RPM-FIX Monitor will then, as determined by the Member: automatically either (A) prevent the System from receiving any new orders in all series in all classes from the Member via the FIX Interface; (B) prevent the System from receiving any new orders in all series in all classes from the Member and cancel all existing orders with a time-in-force of Day in all series in all classes from the Member via the FIX Interface; or (C) send a notification to the Member without any further preventative or cancellation action by the System. When engaged, the RPM-FIX Monitor will still allow the Member to interact with existing orders entered prior to exceeding the FIX Interface Allowable Order Rate setting or the FIX Interface Allowable Contract Execution Rate setting, including sending cancel order messages and receiving trade executions from those orders via the FIX Interface. The RPM-FIX Monitor shall remain engaged until the Member communicates with the Help Desk to enable the acceptance of new orders.

(b) **Mandatory Participation.** EEMs using the FIX Interface must establish at least one FIX Interface Allowable Order Rate setting, with a corresponding specified time period of not less than one second, and not to exceed ten seconds, as established by the Exchange and communicated to Members via Regulatory Circular (a "Corresponding Specified Time Period") and at least one FIX Interface Allowable Contract Execution Rate setting (with a Corresponding Specified Time Period), both of which must be configured to perform the step set forth in either (A) or (B) of subparagraph (a) of this Rule above, upon engagement of the RPM-FIX Monitor. EEMs may establish additional FIX Interface Allowable Order Rate settings and additional FIX Interface Allowable Contract Execution Rate settings, and any such additional settings may be configured to perform the step set forth in either (A), (B), or (C) of subparagraph (a) of this Rule above, upon engagement of the RPM-FIX Monitor.

Interpretations and Policies:

.01 **EEM Grouping**.

(a) EEMs may elect to group with other EEMs to enable the RPM-FIX Monitor to apply collectively to the group. The EEMs in the group must designate a group owner. EEMs may elect to group provided that either: (i) there is at least 75% common ownership between the firms as reflected on each firm's Form BD, Schedule A; or (ii) there is

written authorization signed by all EEMs in the group and the group owner maintains exclusive control of all orders sent to the Exchange from each MPID within the group via the FIX Interface.

(b) An EEM may elect to group with the EEM's clearing firm. A clearing firm may also elect to group several EEMs to enable the RPM-FIX Monitor to apply collectively to the group with the clearing firm designated as the group owner, provided that the clearing firm serves as the clearing firm for all the MPIDs of the group and there is written authorization signed by the clearing firm and each EEM of the group. A clearing firm that has grouped several EEMs may only receive warning messages pursuant to Interpretation and Policy .03 of this Rule, unless one EEM of the group maintains exclusive control of all orders sent to the Exchange from each MPID within the group via the FIX Interface.

(c) The RPM-FIX Monitor for groups will operate in the same manner as described in paragraphs (a) and (b) of Rule 519A, except that: (i) the counting program will count the number of orders entered and the number of contracts traded resulting from an order entered by all MPIDs in the group collectively via the FIX Interface; (ii) the System will trigger the RPM-FIX Monitor when the group collectively exceeds either the FIX Interface Allowable Order Rate or the FIX Interface Allowable Contract Execution Rate for the group; (iii) once engaged, the RPM-FIX Monitor will then either automatically prevent the System from receiving any new orders in all series in all classes from each MPID in the group via the FIX Interface, and, if designated by the group owner's instructions, cancel all existing orders with a time-in-force of Day in all series in all classes from the group via the FIX Interface, or send a notification without any further preventative or cancellation action by the System; and (iv) only the designated group owner may request through the Help Desk to accept new orders for all the EEMs of the group.

.02 GTC Orders and any orders with a time-in-force other than Day received via the FIX Interface will not be cancelled by the RPM-FIX Monitor. However, the System does include such orders received via the FIX Interface in the counting program for purposes of this Rule. Once engaged, the RPM-FIX Monitor will block, but will not cancel any existing GTC orders and any other orders with a time-in-force other than Day. Such orders will remain in the System available for trading when the RPM-FIX Monitor is engaged.

.03 EEMs may elect to receive warning notifications indicating that a specific percentage of a FIX Interface Allowable Order Rate or a FIX Interface Allowable Contract Execution Rate has been met.

.04 At the request of an EEM or in order to maintain a fair and orderly market, the Exchange may pause and restart the specified time period used by the counting program or clear and reset any calculated FIX Interface Allowable Order Rate or FIX Interface Allowable Contract Execution Rate.

[Adopted: December 13, 2016; amended February 6, 2017 (SR-PEARL-2017-06)]

Rule 519B. Risk Protection Monitor for Orders Entered via the MEO Interface ("RPM-MEO")

(a) **Voluntary Risk Protection Functionality.** The System will maintain a counting program ("counting program") for each participating EEM that will count the number of orders entered and the number of contracts traded via an order entered by an EEM on the Exchange via the MEO Interface within a specified time period that has been established by the EEM (the "specified time period"). The maximum duration of the specified time period will be established by the Exchange and announced via a Regulatory Circular. The RPM-MEO Monitor maintains one or more EEM-configurable MEO Interface Allowable Order Rate settings and MEO Interface Allowable Contract Execution Rate settings. When an EEM's order is entered or when an execution of an EEM's order occurs via the MEO Interface, the System will look back over the specified time period to determine if the EEM has: (i) entered during the specified time period a number of orders exceeding their MEO Interface Allowable Order Rate setting(s), or (ii) executed during the specified time period a number of contracts exceeding their MEO Interface Allowable Contract Execution Rate setting(s). Once engaged, the RPM-MEO Monitor will then, as determined by the EEM: automatically either (A) prevent the System from receiving any new orders in all series in all classes from the EEM via the MEO Interface; (B) prevent the System from receiving any new orders in all series in all classes from the EEM and cancel all existing orders with a time-in-force of Day in all series in all classes from the EEM via the MEO Interface; or (C) send a notification to the EEM without any further preventative or cancellation action by the System.

When engaged, the RPM-MEO Monitor will still allow the EEM to interact with existing orders entered prior to exceeding the MEO Interface Allowable Order Rate setting or the MEO Interface Allowable Contract Execution Rate setting, including sending cancel order messages and receiving trade executions from those orders via the MEO Interface. The RPM-MEO Monitor shall remain engaged until the EEM communicates with the Help Desk to enable the acceptance of new orders.

(b) **Mandatory Participation.** EEMs using the MEO Interface must establish at least one MEO Interface Allowable Order Rate setting, with a corresponding specified time period of not less than one second, and not to exceed ten seconds, as established by the Exchange and communicated to Members via Regulatory Circular (a "Corresponding Specified Time Period") and at least one MEO Interface Allowable Contract Execution Rate setting (with a Corresponding Specified Time Period), both of which must be configured to perform the step set forth in either (A) or (B) of subparagraph (a) of this Rule above, upon engagement of the RPM-MEO Monitor. EEMs may establish additional MEO Interface Allowable Order Rate settings and additional MEO Interface Allowable Contract Execution Rate settings, and any such additional settings may be configured to perform the step set forth in either (A), (B), or (C) of subparagraph (a) of this Rule above, upon engagement of the RPM-MEO Monitor.

Interpretations and Policies:

.01 **EEM Grouping**.

(a) EEMs may elect to group with other EEMs to enable the RPM-MEO Monitor to apply collectively to the group. The EEMs in the group must designate a group owner. EEMs may elect to group provided that either: (i) there is at least 75% common ownership between the firms as reflected on each firm's Form BD, Schedule A; or (ii) there is written authorization signed by all EEMs in the group and the group owner maintains exclusive control of all orders sent to the Exchange from each MPID within the group via the MEO Interface.

(b) An EEM may elect to group with the EEM's clearing firm. A clearing firm may also elect to group several EEMs to enable the RPM-MEO Monitor to apply collectively to the group with the clearing firm designated as the group owner, provided that the clearing firm serves as the clearing firm for all the MPIDs of the group and there is written authorization signed by the clearing firm and each EEM of the group. A clearing firm that has grouped several EEMs may only receive warning messages pursuant to Interpretation and Policy .03 of this Rule, unless one EEM of the group maintains exclusive control of all orders sent to the Exchange from each MPID within the group via the MEO Interface.

(c) The RPM-MEO Monitor for groups will operate in the same manner as described in paragraphs (a) and (b) of Rule 519A, except that: (i) the counting program will count the number of orders entered and the number of contracts traded resulting from an order entered by all MPIDs in the group collectively via the MEO Interface; (ii) the System will trigger the RPM-MEO Monitor when the group collectively exceeds either the MEO Interface Allowable Order Rate or MEO Interface Allowable Contract Execution Rate for the group; (iii) once engaged, the RPM-MEO Monitor will then either automatically prevent the System from receiving any new orders in all series in all classes from each MPID in the group via the MEO Interface, and, if designated by the group owner's instructions, cancel all existing orders with a time-in-force of Day in all series in all classes from the group via the MEO Interface, or send a notification without any further preventative or cancellation action by the System; and (iv) only the designated group owner may request the Help Desk to accept new orders for all the EEMs of the group.

.02 Any orders with a time-in-force other than Day received via the MEO Interface will not be cancelled by the RPM-MEO Monitor. However, the System does include such orders received via the MEO Interface in the counting program for purposes of this Rule. Once engaged, the RPM-MEO Monitor will block but will not cancel any orders with a time-in-force other than Day. Such orders will remain in the System available for trading when the RPM-MEO Monitor is engaged.

.03 EEMs may elect to receive warning notifications indicating that a specific percentage of an MEO Interface Allowable Order Rate or an MEO Interface Allowable Contract Execution Rate has been met.

.04 At the request of an EEM or in order to maintain a fair and orderly market, the Exchange may pause and restart the specified time period used by the counting program or clear and reset any calculated MEO Interface Allowable Order Rate or MEO Interface Allowable Contract Execution Rate.

[Adopted: December 13, 2016; amended February 6, 2017 (SR-PEARL-2017-06)]

Rule 519C. Mass Cancellation of Trading Interest

(a) **Cancel.** A Member may remove all of its quotations and/or cancel all or any subset of its orders in the System, by firm name or by Market Participant Identifier ("MPID"), by requesting the Exchange staff to effect such cancellations.

(b) **Cancel and Block.** A Member may request that the Exchange (i) remove all of its quotations and cancel all of its orders in the System and (ii) block all new inbound quotations and orders, by firm name or by MPID. A Member may also request that the Exchange cancel all of its MEO Day orders in the System and block all new inbound MEO Day orders by MPID. The block will remain in effect until the Member requests that the Exchange remove the block.

(c) **Detection of Loss of Communication**

(1) **MIAX Express Order Interface ("MEO").** When a Loss of Communication is detected on a MEO port during a certain time period ("xx" seconds), the System will close the session and automatically cancel quotes and orders, as configured by the Member, provided that when a Loss of Communication is detected on the last connected MEO port during a certain time period ("xx" seconds), the System will close the session and automatically cancel quotes and orders. The Exchange shall determine the appropriate period of ("xx" seconds) and shall notify Members of the value of "xx" seconds via Regulatory Circular. In no event shall "xx" be less than one (1) second or greater than ten (10) seconds.

(2) **Financial Information eXchange ("FIX") Protocol.** When a Loss of Communication is detected on a FIX port the System will logoff the Member's session and (i) cancel all eligible orders for the FIX Session if instructed by the Member upon login, or (ii) cancel all eligible orders identified by the Member. Following a disconnection, a reconnection will not be permitted for a certain period of time ("yy" seconds). The Exchange shall determine the appropriate period of ("yy" seconds) and shall notify Members of the value of "yy" seconds via Regulatory Circular. In no event shall "yy" be less than one (1) second or greater than ten (10) seconds.

Interpretations and Policies:

.01 Good 'Til Cancelled ("GTC") orders, as defined in Rule 516, are not eligible for automatic cancellation under paragraph (c) above.

.02 For purposes of this Rule 519C:

(i) A "Heartbeat" message is a communication which acts as a virtual pulse between the Exchange System and the Member's system. The Heartbeat message sent by the Member and received by the Exchange allows the Exchange to continually monitor its connection with the Member.

(ii) "Loss of Communication"

Is determined on an MEO port by (a) the lack of a certain number of Heartbeats and/or Heartbeat responses as determined by the Exchange and communicated to Members via Regulatory Circular, or (b) the lack of data transmission from the Member within "xx" seconds.

Is determined on a FIX port by the lack of a certain number of Heartbeats and/or Heartbeat responses as determined by the Exchange and communicated to Members via Regulatory Circular, within a certain time period as specified by the Member upon login.

[Adopted: December 13, 2016; amended February 6, 2017 (SR-PEARL-2017-03); amended June 5, 2017 (SR-PEARL-2017-21); amended January 16, 2018 (SR-PEARL-2017-38)]

Rule 520. Limitations on Orders

(a) [Reserved]

(b) **Principal Transactions**. Electronic Exchange Members may not execute as principal orders they represent as agent unless (i) agency orders are first exposed on the Exchange for at least one (1) second, or (ii) the Electronic Exchange Member has been bidding or offering on the Exchange for at least one (1) second prior to receiving an agency order that is executable against such bid or offer.

(c) **Solicitation Orders**. Electronic Exchange Members may not execute orders they represent as agent on the Exchange against orders solicited from Members and non-member broker-dealers to transact with such orders unless the unsolicited order is first exposed on the Exchange for at least one (1) second.

(d) **Orders for the Account of Another Member**. Electronic Exchange Members shall not cause the entry of orders for the account of a MIAX PEARL Market Maker that is exempt from the provisions of Regulation T of the Board of Governors of the Federal Reserve System pursuant to Section 7 of the Exchange Act unless such orders are identified as orders for the account of a MIAX PEARL Market Maker in the manner prescribed by the Exchange.

Interpretations and Policies:

.01 Rule 520(b) prevents an Electronic Exchange Member from executing agency orders to increase its economic gain from trading against the order without first giving other trading interest on the Exchange an opportunity to either trade with the agency order or to trade at the execution price when the Member was already bidding or offering on the Book. However, the Exchange recognizes that it may be possible for an Electronic Exchange Member to establish a relationship with a customer or other person (including affiliates) to deny agency orders the opportunity to interact on the Exchange and to realize similar economic benefits as it would achieve by executing agency orders as principal. It will be a violation of Rule 520(b) for an Electronic Exchange Member to be a party to any arrangement designed to circumvent Rule 520(b) by providing an opportunity for a customer or other person (including affiliates) to regularly execute against agency orders handled by the Electronic Exchange Member immediately upon their entry into the System.

.02 It will be a violation of Rule 520(c) for an Electronic Exchange Member to cause the execution of an order it represents as agent on the Exchange by orders it solicited from Members and non-member broker-dealers to transact with such orders, whether such solicited orders are entered into the System directly by the Electronic Exchange Member or by the solicited party (either directly or through another Member), if the Member fails to expose orders on the Exchange as required by Rule 520(c).

.03 For purposes of paragraphs (b) and (c) above, orders subject to the Managed Interest Process described in Rule 515(d) and Market Maker orders and quotes displayed at a price other than their limit price or quote price as described in Rule 515(d), and Post-Only Orders subject to the POP Process described in Rule 515(g) are not deemed "exposed" on the Exchange.

[Adopted: December 13, 2016]

Rule 521. Nullification and Adjustment of Options Transactions Including Obvious Errors

The Exchange may nullify a transaction or adjust the execution price of a transaction in accordance with this Rule. However, the determination as to whether a trade was executed at an erroneous price may be made by mutual agreement of the affected parties to a particular transaction. A trade may be nullified or adjusted on the terms that all parties to a particular transaction agree, provided, however, that such agreement to nullify or adjust must be conveyed to the Exchange in a manner prescribed by the Exchange prior to 8:30 a.m. Eastern Time on the first trading day following the execution. It is considered conduct inconsistent with just and equitable principles of trade for any Member to use the mutual adjustment process to circumvent any applicable Exchange Rule, the Exchange Act or any of the rules and regulations thereunder.

(a) **Definitions.**

(1) **Customer.** For purposes of this Rule, the term "Customer" means a Priority Customer as defined in Rule 100.

(2) **Erroneous Sell/Buy Transaction.** For purposes of this Rule, an "erroneous sell transaction" is one in which the price received by the person selling the option is erroneously low, and an "erroneous buy transaction" is one in which the price paid by the person purchasing the option is erroneously high.

(3) **Official.** For purposes of this Rule, an "Official" is an Officer of the Exchange or such other employee designee of the Exchange that is trained in the application of this Rule.

(4) **Size Adjustment Modifier.** For purposes of this Rule, the Size Adjustment Modifier will be applied to individual transactions as follows:

Number of Contracts per Execution	Adjustment – Theoretical Price Plus/Minus
1-50	N/A
51-250	2 times adjustment amount
251-1000	2.5 times adjustment amount
1001 or more	3 times adjustment amount

(b) **Theoretical Price.** Upon receipt of an obvious or catastrophic error notification (as described below) and prior to any review of a transaction execution price, the "Theoretical Price" for the option must be determined. For purposes of this Rule, if the applicable option series is traded on at least one other options exchange, then the Theoretical Price of an option series is the last NBB just prior to the trade in question with respect to an erroneous sell transaction or the last NBO just prior to the trade in question with respect to an erroneous buy transaction unless one of the exceptions in subparagraphs (b)(1) through (3) below exists. For purposes of this provision, when a single order received by the Exchange is executed at multiple price levels, the last NBB and last NBO just prior to the trade in question would be the last NBB and last NBO just prior to the Exchange's receipt of the order. The Exchange will rely on this paragraph (b) and Interpretation and Policy .03 of this Rule when determining Theoretical Price.

(1) **Transactions at the Open.** For a transaction occurring as part of the Opening Process (as described in Rule 503) the Exchange will determine the Theoretical Price if there is no NBB or NBO for the affected series just prior to the erroneous transaction or if the bid/ask differential of the NBB and NBO just prior to the erroneous transaction is equal to or greater than the Minimum Amount set forth in the chart contained in subparagraph (b)(3) below. If the bid/ask differential is less than the Minimum Amount, the Theoretical Price is the NBB or NBO just prior to the erroneous transaction.

(2) **No Valid Quotes.** The Exchange will determine the Theoretical Price if there are no quotes or no valid quotes for comparison purposes. Quotes that are not valid are:

(A) all quotes in the applicable option series published at a time where the last NBB is higher than the last NBO in such series (a "crossed market");

(B) quotes published by the Exchange that were submitted by either party to the transaction in question;

(C) quotes published by another options exchange if either party to the transaction in question submitted the quotes in the series representing such options exchange's best bid or offer, provided that the Exchange will only consider quotes invalid on other options exchanges in up to twenty-five (25) total options series that the party identifies to the Exchange the quotes which were submitted by such party and published by other options exchanges; and

(D) quotes published by another options exchange against which the Exchange has declared self-help.

(3) **Wide Quotes.** The Exchange will determine the Theoretical Price if the bid/ask differential of the NBB and NBO for the affected series just prior to the erroneous transaction was equal to or greater than the Minimum Amount set forth below and there was a bid/ask differential less than the Minimum Amount during the 10 seconds prior to the transaction. If there was no bid/ask differential less than the Minimum Amount during the 10 seconds prior to the transaction then the Theoretical Price of an option series is the last NBB or NBO just prior to the transaction in question, as set forth in paragraph (b) above.

Bid Price at Time of Trade	**Minimum Amount**
Below $2.00	$0.75
$2.00 to $5.00	$1.25
Above $5.00 to $10.00	$1.50
Above $10.00 to $20.00	$2.50
Above $20.00 to $50.00	$3.00
Above $50.00 to $100.00	$4.50
Above $100.00	$6.00

(c) **Obvious Errors.**

(1) **Definition.** For purposes of this Rule, an Obvious Error will be deemed to have occurred when the Exchange receives a properly submitted obvious or catastrophic error notification (as defined below) where the execution price of a transaction is higher or lower than the Theoretical Price for the series by an amount equal to at least the amount shown below:

Theoretical Price	**Minimum Amount**
Below $2.00	$0.25
$2.00 to $5.00	$0.40
Above $5.00 to $10.00	$0.50
Above $10.00 to $20.00	$0.80
Above $20.00 to $50.00	$1.00
Above $50.00 to $100.00	$1.50
Above $100.00	$2.00

(2) **Time Deadline.** A party that believes that it participated in a transaction that was the result of an Obvious Error must submit a notification to MIAX PEARL Regulatory Control ("MRC") (an "obvious error notification") in the manner specified from time to time by the Exchange in a circular distributed to Members. The obvious error notification must be received by MRC within the timeframes specified below:

(A) **Customer Orders**. For an execution of a Customer order, an obvious error notification must be received by MRC within thirty (30) minutes of the execution, subject to subparagraph (C) below; and

(B) **"Non-Customer" Orders**. For an execution of any order other than a Customer order, an obvious error notification must be received by MRC within fifteen (15) minutes of the execution, subject to subparagraph (C) below.

(C) **Linkage Trades**. Any other options exchange will have a total of forty-five (45) minutes for Customer orders and thirty (30) minutes for non-Customer orders, measured from the time of execution on the Exchange, to submit an obvious error notification to MRC for review of transactions routed to the Exchange from that options exchange and executed on the Exchange pursuant to the Options Order Protection and Locked/Crossed Market Plan ("Linkage Trades"). This includes obvious error notifications on behalf of another options exchange submitted by a third-party routing broker if such third-party broker identifies the affected transactions as Linkage Trades. In order to facilitate timely reviews of Linkage Trades the Exchange will accept obvious error notifications from either the other options exchange or, if applicable, the third-party routing broker that routed the affected order(s). The additional fifteen (15) minutes provided with respect to Linkage Trades shall only apply to the extent the options exchange that originally received and routed the order to the Exchange itself received a timely obvious error notification from the entering participant (i.e., within 30 minutes if a Customer order or 15 minutes if a non-Customer order).

(3) **Official Acting on Own Motion.** An Official may review a transaction believed to be erroneous on his/her own motion in the interest of maintaining a fair and orderly market and for the protection of investors. A transaction reviewed pursuant to this paragraph may be nullified or adjusted only if it is determined by the Official that the transaction is erroneous in accordance with the provisions of this Rule, provided that the time deadlines of subparagraph (c)(2) above shall not apply. The Official shall act as soon as possible after becoming aware of the transaction, and ordinarily would be expected to act on the same day that the transaction occurred. In no event shall the Official act later than 8:30 a.m. Eastern Time on the next trading day following the date of the affected transaction. A party affected by a determination to nullify or adjust a transaction pursuant to this provision may appeal such determination in accordance with paragraph (l) below; however, a determination by an Official not to review a transaction or a determination not to nullify or adjust a transaction for which a review was conducted on an Official's own motion is not appealable. If a transaction is reviewed and a determination is rendered pursuant to another provision of this Rule, no additional relief may be granted under this provision.

(4) **Adjust or Bust.** If it is determined that an Obvious Error has occurred, the Exchange shall take one of the actions listed below. Upon taking final action, the Exchange shall promptly notify both parties to the trade electronically or via telephone.

(A) **Non-Customer Transactions**. Where neither party to the transaction is a Customer, the execution price of the transaction will be adjusted by the Official pursuant to the table below. Any non-Customer Obvious Error exceeding 50 contracts will be subject to the Size Adjustment Modifier defined in subparagraph (a)(4) above.

Theoretical Price (TP)	Buy Transaction Adjustment – TP Plus	Sell Transaction Adjustment – TP Minus
Below $3.00	$0.15	$0.15
At or above $3.00	$0.30	$0.30

(B) **Customer Transactions**. Where at least one party to the Obvious Error is a Customer, the trade will be nullified, subject to subparagraph (C) below.

(C) If any Member submits an obvious error notification pursuant to this Rule, and in the aggregate that Member has 200 or more Customer transactions under review concurrently and the orders resulting in such transactions were submitted during the course of 2 minutes or less, where at least one party to the Obvious Error is a non-Customer, the Exchange will apply the non-Customer adjustment criteria set forth in subparagraph (A) above to such transactions.

(d) **Catastrophic Errors.**

(1) **Definition.** For purposes of this Rule, a Catastrophic Error will be deemed to have occurred when the execution price of a transaction is higher or lower than the Theoretical Price for the series by an amount equal to at least the amount shown below:

Theoretical Price	Minimum Amount
Below $2.00	$0.50
$2.00 to $5.00	$1.00
Above $5.00 to $10.00	$1.50
Above $10.00 to $20.00	$2.00
Above $20.00 to $50.00	$2.50
Above $50.00 to $100.00	$3.00
Above $100.00	$4.00

(2) **Time Deadline.** A party that believes that it participated in a transaction that was the result of a Catastrophic Error must submit a notification (a "catastrophic error notification") to MRC in the manner specified from time to time on the Exchange's website. Such catastrophic error notification must be received by MRC by 8:30 a.m. Eastern Time on the first trading day following the execution. For transactions in an expiring options series that take place on an expiration day, a party must submit a catastrophic error notification to MRC within 45 minutes after the close of trading that same day.

(3) **Adjust or Bust.** If it is determined that a Catastrophic Error has occurred, the Exchange shall take action as set forth below. Upon taking final action, the Exchange shall promptly notify both parties to the trade electronically or via telephone. In the event of a Catastrophic Error, the execution price of the affected transaction will be adjusted by the Official pursuant to the table below. Any Customer order subject to this subparagraph will be nullified if the adjustment would result in an execution price higher (for buy transactions) or lower (for sell transactions) than the Customer's limit price.

Theoretical Price (TP)	Buy Transaction Adjustment – TP Plus	Sell Transaction Adjustment – TP Minus
Below $2.00	$0.50	$0.50
$2.00 to $5.00	$1.00	$1.00
Above $5.00 to $10.00	$1.50	$1.50
Above $10.00 to $20.00	$2.00	$2.00
Above $20.00 to $50.00	$2.50	$2.50
Above $50.00 to $100.00	$3.00	$3.00
Above $100.00	$4.00	$4.00

(e) **Significant Market Events.**

(1) **Definition.** For purposes of this Rule, a Significant Market Event will be deemed to have occurred when: criterion (A) below is met or exceeded, or the sum of all applicable event statistics, where each is expressed as a percentage of the relevant threshold in criteria (A) through (D) below, is greater than or equal to 150% and 75% or

more of at least one category is reached, provided that no single category can contribute more than 100% to the sum and any category contributing more than 100% will be rounded down to 100%. All criteria set forth below will be measured in aggregate across all exchanges.

(A) Transactions that are potentially erroneous would result in a total Worst-Case Adjustment Penalty of $30,000,000, where the Worst-Case Adjustment Penalty is computed as the sum across all potentially erroneous trades, of:

(i) $0.30 (i.e., the largest Transaction Adjustment value listed in subparagraph (e)(3)(A) below); times

(ii) the contract multiplier for each traded contract; times

(iii) the number of contracts for each trade; times

(iv) the appropriate Size Adjustment Modifier for each trade, if any, as defined in subparagraph (e)(3)(A) below.

(B) Transactions involving 500,000 options contracts are potentially erroneous;

(C) Transactions with a notional value (i.e., number of contracts traded multiplied by the option premium multiplied by the contract multiplier) of $100,000,000 are potentially erroneous;

(D) 10,000 transactions are potentially erroneous.

(2) **Coordination with Other Options Exchanges.** To ensure consistent application across options exchanges, in the event of a suspected Significant Market Event, the Exchange shall initiate a coordinated review of potentially erroneous transactions with all other affected options exchanges to determine the full scope of the event. When this paragraph is invoked, the Exchange will promptly coordinate with the other options exchanges to determine the appropriate review period as well as select one or more specific points in time prior to the transactions in question and use one or more specific points in time to determine Theoretical Price. Other than the selected points in time, if applicable, the Exchange will determine Theoretical Price in accordance with paragraph (b) above.

(3) **Adjust or Bust.** If it is determined that a Significant Market Event has occurred then, using the parameters agreed as set forth in subparagraph (e)(2) above, if applicable, an Official will determine whether any or all transactions under review qualify as Obvious Errors. The Exchange shall take one of the actions listed below with respect to all transactions that qualify as Obvious Errors pursuant to subparagraph (c)(1) above. Upon taking final action, the Exchange shall promptly notify both parties to the trade electronically or via telephone.

(A) The execution price of each affected transaction will be adjusted by an Official to the price provided below unless both parties agree to adjust the transaction to a different price or agree to nullify the transaction. In the context of a Significant Market Event, any error exceeding 50 contracts will be subject to the Size Adjustment Modifier defined in subparagraph (a)(4) above.

Theoretical Price (TP)	Buy Transaction Adjustment – TP Plus	Sell Transaction Adjustment – TP Minus
Below $3.00	$0.15	$0.15
At or above $3.00	$0.30	$0.30

(B) Where at least one party to the transaction is a Customer, the trade will be nullified if the adjustment would result in an execution price higher (for buy transactions) or lower (for sell transactions) than the Customer's limit price.

(4) **Nullification of Transactions.** If the Exchange, in consultation with other options exchanges, determines that timely adjustment is not feasible due to the extraordinary nature of the situation, then the Exchange will nullify some or all transactions arising out of the Significant Market Event during the review period selected by the Exchange and other options exchanges consistent with this paragraph. To the extent the Exchange, in consultation with other options exchanges, determines to nullify less than all transactions arising out of the Significant Market Event, those transactions subject to nullification will be selected based upon objective criteria with a view toward maintaining a fair and orderly market and the protection of investors and the public interest.

(5) **Final Rulings.** With respect to rulings made pursuant to this paragraph, the number of affected transactions is such that immediate finality is necessary to maintain a fair and orderly market and to protect investors and the public interest. Accordingly, rulings by the Exchange pursuant to this paragraph are non-appealable.

(f) **Trading Halts.** The Exchange shall nullify any transaction that occurs during a trading halt in the affected option on the Exchange or, respecting equity options (including options overlying ETFs), when the trade occurred during a regulatory halt as declared by the primary market for the underlying security pursuant to Exchange Rule 504.

(g) **Erroneous Print in Underlying.** A trade resulting from an erroneous print(s) disseminated by the underlying market that is later nullified by that underlying market shall be adjusted or nullified as set forth in subparagraph (c)(4) of this Rule, provided a party submits an obvious or catastrophic error notification to MRC in a timely manner as set forth below. For purposes of this paragraph, a trade resulting from an erroneous print(s) shall mean any options trade executed during a period of time for which one or more executions in the underlying security are nullified, and for one second thereafter. If a party believes that it participated in an erroneous transaction resulting from an erroneous print(s) pursuant to this paragraph it must submit an obvious error notification to MRC within the timeframes set forth in subparagraph (c)(2) above, with the allowed notification timeframe commencing at the time of notification by the underlying market(s) of nullification of transactions in the underlying security. If multiple underlying markets nullify trades in the underlying security, the allowed notification timeframe will commence at the time of the first market's notification.

(h) **Erroneous Quote in Underlying.** A trade resulting from an erroneous quote(s) in the underlying security shall be adjusted or nullified as set forth in subparagraph (c)(4) of this Rule, provided a party submits an obvious or catastrophic error notification to MRC in a timely manner as set forth below. An erroneous quote occurs when the underlying security has a bid/ask differential of at least $1.00 and has a bid/ask differential at least five times greater than the average bid/ask differential for such underlying security during the time period encompassing two minutes before and after the dissemination of such quote. For purposes of this paragraph, the average bid/ask differential shall be determined by adding the bid/ask differentials of sample quotes at regular 15-second intervals during the four-minute time period referenced above (excluding the quote(s) in question) and dividing by the number of quotes during such time period (excluding the quote(s) in question). If a party believes that it participated in an erroneous transaction resulting from an erroneous quote(s) pursuant to this paragraph it must notify MRC in accordance with subparagraph (c)(2) above.

(i) **Stop (and Stop-Limit) Order Trades Elected by Erroneous Trades.** Transactions resulting from the election of a stop or stop-limit order by an erroneous trade in an option contract shall be nullified by the Exchange, provided a party submits an obvious or catastrophic error notification to MRC within the timeframes required by this Rule. If a party believes that it participated in an erroneous transaction pursuant to this paragraph it must submit an obvious or catastrophic error notification to MRC within the timeframes set forth in subparagraph (c)(2) above. The notification timeframe will commence at the time of the Exchange's receipt of notification of the nullification of transaction(s) that elected the stop or stop-limit order.

(j) **Linkage Trades.** If the Exchange routes an order pursuant to the Options Order Protection and Locked/Crossed Market Plan (as defined in Exchange Rule 1400(n)) that results in a Linkage Trade on another options exchange and such options exchange subsequently nullifies or adjusts the Linkage Trade pursuant to its rules, the Exchange will perform all actions necessary to complete the nullification or adjustment of the Linkage Trade.

(k) **Verifiable Disruptions or Malfunctions of Exchange Systems.** Absent mutual agreement, parties to a trade may have a trade nullified or its price adjusted if any such party makes a documented request within the time specified in subparagraph (c)(2) above, and one of the conditions below is met:

(1) The trade resulted from a verifiable disruption or malfunction of an Exchange execution, dissemination, or communication system that caused a quote/order to trade in excess of its disseminated size (e.g. a quote/order that is frozen, because of an Exchange System error, and repeatedly traded) in which case trades in excess of the disseminated size may be nullified; or

(2) The trade resulted from a verifiable disruption or malfunction of an Exchange dissemination or communication system that prevented a Member from updating or canceling a quote/order for which the Member is responsible where there is Exchange documentation providing that the Member sought to update or cancel the quote/order.

(l) **Appeal.** If an affected party appeals an Official decision under this Rule (an "appeal") within the time permitted, the Chief Regulatory Officer ("CRO") or his/her designee will review such decision. An appeal under this Rule must be submitted in writing via email or other electronic means (as specified from time to time by the Exchange via Regulatory Circular) within thirty minutes after a party receives official notification of a final determination made by an Official under this Rule. The CRO or his/her designee shall review the facts and render a decision as soon as practicable, but generally on the same trading day as the execution(s) under review. Decisions respecting appeals that are received after 3:00 p.m. Eastern Time will be rendered as soon as practicable, but in no event later than the trading day following the date of the execution under review.

(1) **Absence of the CRO.** In the absence of the CRO, a designee of the CRO will be appointed to act in this capacity.

(2) **Appeal Fee.** A Member that submits an appeal seeking the review of an Official ruling shall be assessed a fee of $500.00 for each Official ruling to be reviewed that is sustained and not overturned or modified by the CRO or his/her designee. In addition, in instances where the Exchange, on behalf of a Member, requests a determination by another market center that a transaction is clearly erroneous, the Exchange will pass any resulting charges through to the relevant Member.

(3) **Authority of the CRO.** Decisions of the CRO or his/her designee concerning

(i) the review on appeal of Official rulings relating to the nullification or adjustment of transactions, and

(ii) initial requests for relief,

shall be final and may not be appealed to the Exchange's Board.

(4) Any determination by an Officer or by the CRO or his/her designee shall be rendered without prejudice as to the rights of the parties to the transaction to submit their dispute to arbitration.

Interpretations and Policies:

.01 **Limit Up-Limit Down State.** During a pilot period that expires at the close of business on October 18, 2019, an execution will not be subject to review as an Obvious Error or Catastrophic Error pursuant to paragraph (c) or (d) of this Rule if it occurred while the underlying security was in a "Limit State" or "Straddle State," as defined in the Regulation NMS Plan to Address Extraordinary Market Volatility (the "Limit Up-Limit Down Plan" or the "Plan". Nothing in this provision shall prevent such execution from being reviewed on an Official's own motion pursuant to subparagraph (c)(3) of this Rule, or a bust or adjust pursuant to paragraphs (e) through (k) of this Rule.

.02 For purposes of this Rule, to the extent the provisions of this Rule would result in the Exchange applying an adjustment of an erroneous sell transaction to a price lower than the execution price or an erroneous buy transaction to a price higher than the execution price, the Exchange will not adjust or nullify the transaction, but rather, the execution price will stand.

.03 **Exchange Determining Theoretical Price**. For purposes of this Rule, when the Exchange must determine Theoretical Price pursuant to sub-paragraphs (b)(1)-(3) of this Rule (i.e., at the open, when there are no valid quotes or when there is a wide quote), then the Exchange will determine Theoretical Price as follows.

(a) The Exchange will request Theoretical Price from the third party vendor defined in paragraph (d) below ("TP Provider") to which the Exchange and all other options exchanges have subscribed. The Exchange will apply the Theoretical Price provided by the TP Provider, except as otherwise described below.

(b) To the extent an Official of the Exchange believes that the Theoretical Price provided by the TP Provider is fundamentally incorrect and cannot be used consistent with the maintenance of a fair and orderly market, the Official shall contact the TP Provider to notify the TP Provider of the reason the Official believes such Theoretical Price is inaccurate and to request a review and correction of the calculated Theoretical Price. The Exchange shall also promptly provide electronic notice to other options exchanges that the TP Provider has been contacted consistent with this paragraph and include a brief explanation of the reason for the request.

(c) An Official of the Exchange may determine the Theoretical Price if the TP Provider has experienced a systems issue that has rendered its services unavailable to accurately calculate Theoretical Price and such issue cannot be corrected in a timely manner.

(d) The current TP Provider to which the Exchange and all other options exchanges have subscribed is: CBOE Livevol, LLC. Neither the Exchange, the TP Provider, nor any affiliate of the TP Provider (the TP Provider and its affiliates are referred to collectively as the "TP Provider"), makes any warranty, express or implied, as to the results to be obtained by any person or entity from the use of the TP Provider pursuant to this Interpretation .03. The TP Provider does not guarantee the accuracy or completeness of the calculated Theoretical Price. The TP Provider disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to such Theoretical Price. Neither the Exchange nor the TP Provider shall have any liability for any damages, claims, losses (including any indirect or consequential losses), expenses, or delays, whether direct or indirect, foreseen or unforeseen, suffered by any person arising out of any circumstance or occurrence relating to the use of such Theoretical Price or arising out of any errors or delays in calculating such Theoretical Price.

[Adopted: December 13, 2016; amended September 1, 2017 (SR-PEARL-2017-33); amended April 5, 2019 (SR-PEARL-2019-14)]

Rule 522. Price Binding Despite Erroneous Report

The price at which an order is executed shall be binding notwithstanding that an erroneous report in respect thereto may have been rendered, or no report rendered. A report shall not be binding if an order was not actually executed but was reported to have been executed.

[Adopted: December 13, 2016]

Rule 523. Authority to Take Action Under Emergency Conditions

(a) The Chairman of the Board, the President or such other person or persons as may be designated by the Board shall have the power to halt or suspend trading in some or all securities traded on the Exchange, to close some or all Exchange facilities, to determine the duration of any such halt, suspension or closing, to take one or more of the actions permitted to be taken by any person or body of the Exchange under Exchange Rules, or to take any other action deemed to be necessary or appropriate for the maintenance of a fair and orderly market or the protection of investors, or otherwise in the public interest, due to emergency conditions or extraordinary circumstances, such as

(1) actual or threatened physical danger, severe climatic conditions, natural disaster, civil unrest, terrorism, acts of war, or loss or interruption of facilities utilized by the Exchange, or (2) a request by a governmental agency or official, or (3) a period of mourning or recognition for a person or event.

(b) The person taking the action shall notify the Board of actions taken pursuant to this Rule, except for a period of mourning or recognition for a person or event, as soon thereafter as is feasible.

[Adopted: December 13, 2016]

Rule 524. Reporting of Matched Trades to Clearing Corporation

On each business day at or prior to such time as may be prescribed by the Clearing Corporation, the Exchange shall furnish the Clearing Corporation a report of each Clearing Member's matched trades based on the trade information filed with the Exchange on that day. Only trades which have been matched in accordance with the provisions of these Rules shall be furnished by the Exchange to the Clearing Corporation, and the Exchange shall assume no responsibility with respect to any unmatched trade or for any delays or errors in the reporting to it of trade information. The Exchange may delegate its responsibility in respect of trade matching to the Clearing Corporation or other facility, in which case Clearing Members shall abide by the procedures established by the Clearing Corporation or other facility in the filing of trade information, the reconciliation of unmatched trades, and other actions pertinent to trade comparison.

Interpretations and Policies:

.01 Post-trade adjustments that do not affect the contractual terms of a trade are to be performed by the Member via an Exchange approved electronic interface communicated to Members via Regulatory Circular.

[Adopted: December 13, 2016; amended July 28, 2017 (SR-PEARL-2017-31)]

Rule 525. Limitation on Dealings

No Member shall bid, offer, purchase or write (sell) on the Exchange any security other than an option contract that is currently open for trading in accordance with the provisions of Chapter IV.

[Adopted: December 13, 2016]

Rule 526. Limitation on the Liability of Index Licensors for Options on Exchange-Traded Fund Shares

(a) The term "index licensor" as used in this Rule refers to any entity that grants the Exchange a license to use one or more indexes or portfolios in connection with the trading of options on Exchange-Traded Fund Shares (as defined in Rule 402(i)).

(b) No index licensor with respect to any index or portfolio underlying an option on Exchange-Traded Fund Shares traded on the Exchange makes any warranty, express or implied, as to the results to be obtained by any person or entity from the use of such index or portfolio, any opening, intra-day or closing value therefor, or any data included therein or relating thereto, in connection with the trading of any option contract on Exchange-Traded Fund Shares based thereon or for any other purpose. The index licensor shall obtain information for inclusion in, or for use in the calculation of, such index or portfolio from sources it believes to be reliable, but the index licensor does not guarantee the accuracy or completeness of such index or portfolio, any opening, intra-day or closing value therefor, or any data included therein or related thereto. The index licensor hereby disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to any such index or portfolio, any opening, intra-day or closing value therefor, any data included therein or relating thereto, or any option contract on Exchange-Traded Fund Shares based thereon. The index licensor shall have no liability for any damages, claims, losses (including any indirect or consequential losses), expenses or delays, whether direct or indirect, foreseen or unforeseen, suffered by any person arising out of any circumstance or occurrence relating to the person's use of such index or portfolio, any opening,

intra-day or closing value therefor, any data included therein or relating thereto, or any option contract on Exchange-Traded Fund Shares based thereon, or arising out of any errors or delays in calculating or disseminating such index or portfolio.

[Adopted: December 13, 2016]

Rule 527. Exchange Liability

(a) Except to the extent provided in paragraph (b) of this Rule, and except as otherwise expressly provided in the Rules, neither the Exchange nor its directors, officers, committee members, limited liability company members, employees or agents shall be liable to Members or to persons associated therewith for any loss, expense, damages or claims that arise out of the use or enjoyment of the facilities or services afforded by the Exchange, any interruption in or failure or unavailability of any such facilities or services, or any action taken or omitted to be taken in respect to the business of the Exchange except to the extent such loss, expense, damages or claims are attributable to the willful misconduct, gross negligence, bad faith or fraudulent or criminal acts of the Exchange or its officers, employees or agents acting within the scope of their authority. Without limiting the generality of the foregoing and subject to the same exception, the Exchange shall have no liability to any person for any loss, expense, damages or claims that result from any error, omission or delay in calculating or disseminating any current or closing index value, any current or closing value of interest rate options, or any reports of transactions in or quotations for options or other securities, including underlying securities. The Exchange makes no warranty, express or implied, as to results to be obtained by any person or entity from the use of any data transmitted or disseminated by or on behalf of the Exchange or any reporting authority designated by the Exchange, including but not limited to reports of transactions in or quotations for securities traded on the Exchange or underlying securities, or reports of interest rate measures or index values or related data, and the Exchange makes no express or implied warranties of merchantability or fitness for a particular purpose or use with respect to any such data. The foregoing limitations of liability and disclaimers shall be in addition to, and not in limitation of, the provisions of the Exchange's By-Laws.

(b) Whenever custody of an unexecuted order or quote is transmitted by a Member to or through the Exchange's System or to any other automated facility of the Exchange whereby the Exchange assumes responsibility for the transmission or execution of the order or quote, provided that the Exchange has acknowledged receipt of such order or quote, the Exchange's liability for the negligent acts or omissions of its employees or for the failure of its Systems or facilities shall not exceed the limits provided in this paragraph (b), and no assets of the Exchange shall be applied or shall be subject to such liability in excess of the following limits:

(1) As to any one or more claims made by a single Member growing out of the use or enjoyment of the facilities afforded by the Exchange on a single trading day, the Exchange shall not be liable in excess of the larger of $100,000 or the amount of any recovery obtained by the Exchange under any applicable insurance maintained by the Exchange;

(2) As to the aggregate of all claims made by all Members growing out of the use or enjoyment of the facilities afforded by the Exchange on a single trading day, the Exchange shall not be liable in excess of the larger of $250,000 or the amount of the recovery obtained by the Exchange under any applicable insurance maintained by the Exchange;

(3) As to the aggregate of all claims made by all Members growing out of the use or enjoyment of the facilities afforded by the Exchange during a single calendar month, the Exchange shall not be liable in excess of the larger of $500,000 or the amount of the recovery obtained by the Exchange under any applicable insurance maintained by the Exchange.

(c) If all of the claims arising out of the use or enjoyment of the facilities afforded by the Exchange cannot be fully satisfied because in the aggregate they exceed the applicable maximum amount of liability provided for in paragraph (b) above, then such maximum amount shall be allocated among all such claims arising on a single trading day or during a single calendar month, as applicable, written notice of which has been given to the Exchange no later than

the opening of trading on the next business day following the day on which the use or enjoyment of Exchange facilities giving rise to the claim occurred, based upon the proportion that each such claim bears to the sum of all such claims

[Adopted: December 13, 2016]

Rule 528. Legal Proceedings Against the Exchange and its Directors, Officers, Employees, Contractors or Agents

No Member or person associated with a Member shall institute a lawsuit or other legal proceeding against the Exchange or any director, officer, limited liability company member, employee, contractor, agent or other official of the Exchange or any subsidiary of the Exchange, for actions taken or omitted to be taken in connection with the official business of the Exchange or any subsidiary, except to the extent such actions or omissions constitute violations of the federal securities laws for which a private right of action exists. This provision shall not apply to appeals of disciplinary actions or other actions by the Exchange as provided for in the Rules.

[Adopted: December 13, 2016]

Rule 529. Order Routing to Other Exchanges

The Exchange may automatically route orders to other exchanges under certain circumstances as described below and elsewhere in these Rules ("Routing Services"). In connection with such services, the following shall apply:

(a) Routing Services will be provided in conjunction with one or more routing brokers that are not affiliated with the Exchange. For each routing broker used by the Exchange, an agreement will be in place between the Exchange and the routing broker that will, among other things, restrict the use of any confidential and proprietary information that the routing broker receives to legitimate business purposes necessary for routing orders at the direction of the Exchange.

(1) The Exchange shall establish and maintain procedures and internal controls reasonably designed to adequately restrict the flow of confidential and proprietary information between the Exchange and the routing broker, and any other entity, including any affiliate of the routing broker, and, if the routing broker or any of its affiliates engages in any other business activities other than providing routing services to the Exchange, between the segment of the routing broker or affiliate that provides the other business activities and the segment of the routing broker that provides the Routing Services.

(2) The Exchange may not use a routing broker for which the Exchange or any affiliate of the Exchange is the designated examining authority.

(3) The Exchange will provide its Routing Services in compliance with the provisions of the Exchange Act and the rules thereunder, including, but not limited to, the requirements in Section 6(b)(4) and (5) of the Exchange Act that the rules of a national securities exchange provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities, and not be designed to permit unfair discrimination between customers, issuers, brokers or dealers.

(4) For all Routing Services, the Exchange will determine the logic that provides when, how, and where orders are routed away to other exchanges.

(5) The routing broker will receive routing instructions from the Exchange, to route orders to other exchanges and report such executions back to the Exchange. The routing broker cannot change the terms of an order or the routing instructions, nor does the routing broker have any discretion about where to route an order.

(6) Any bid or offer entered on the Exchange routed to another exchange through a routing broker that results in an execution shall be binding on the Member that entered such bid/offer.

(b) **Route Mechanism.**

(1) **General.** The Route Mechanism described in this Section (b) will be used after the Exchange's Opening Process under Rule 503 has been completed. Routing will be used when an Eligible Order is received and/or reevaluated that is both routable and marketable against the opposite side ABBO upon receipt and the Exchange's disseminated market is not equal to the opposite side ABBO, or is equal to the opposite side ABBO and of insufficient size to satisfy the order. The term Eligible Order will be used in the following paragraphs to refer to the Eligible Order being handled by the Route Mechanism. Eligible Orders are defined as: all Public Customer Orders received via the FIX Interface other than Intermarket Sweep Order ("ISO"), as defined in Rule 516(f), Do Not Route ("DNR") orders as defined in Rule 516(g) and Post-Only Orders as defined in Rule 516(j), all of which are not eligible to be routed. Orders received via the MEO Interface will not be routed and will be handled as set forth in Rule 515. Eligible Orders resting on the Book may be routed with an incoming Eligible Order that has initiated a Route Mechanism.

(2) **Routing Mechanism.**

(i) An Eligible Order may be routed if the displayed NBBO was locked or crossed upon receipt of the Eligible Order. If at the time of receipt of the Eligible Order, the opposite side ABBO is also locking or crossing the same side PBBO, the System will immediately route the Eligible Order, together with any routable interest resting on the same side PBBO, to the opposite side ABBO. The Eligible Order and any routable resting interest will be processed in the order in which they were received.

(ii) The System will route ISOs representing Eligible Orders to away markets disseminating prices better than the Exchange's disseminated market. The routed order will be priced at the ABBO with a size equal to each ABBO exchange's disseminated size. If there are still additional contracts to be executed from the Eligible Order after the order has been routed to all away markets disseminating the ABBO for the away markets' full size, the System will handle remaining contracts from the Eligible Order in accordance with the provisions of Exchange Rule 515.

[Adopted: December 13, 2016; amended April 3, 2017 (SR-PEARL-2017-11)]

Rule 530. Limit Up-Limit Down

Paragraphs (a)-(j) of this Rule shall be in effect during a pilot period that expires at the close of business on October 18, 2019. The Exchange will provide the Commission with data and analysis during the duration of this pilot as requested. This Rule establishes procedures to address extraordinary volatility in NMS Stocks (as defined below) and outlines MIAX PEARL's Limit Up-Limit Down processing.

(a) **Definitions.** The capitalized terms in this Rule 530(a) and throughout the MIAX PEARL Rules shall have the same meaning as provided for in the Plan.

"**Eligible Reported Transactions**" shall have the meaning prescribed by the Operating Committee of the Plan (as defined below) and shall generally mean transactions that are eligible to update the last sale price of an NMS Stock.

"**Limit State**" shall have the meaning provided in Section VI of the Plan. When a National Best Bid is below the Lower Price Band calculated by the Processor (as defined below) for an NMS Stock or a National Best Offer is above the Upper Price Band calculated by the Processor for an NMS Stock, the Processor will disseminate such National Best Bid or National Best Offer with an appropriate flag identifying it as non-executable. When a National Best Offer is equal to the Lower Price Band or a National Best Bid is equal to the Upper Price Band for an NMS Stock, the Processor will distribute such National Best Bid or National Best Offer with an appropriate flag identifying it as a "Limit State Quotation."

"**LULD Functionality**" shall mean the specific processing logic applied by the Exchange System to options traded on the Exchange when the underlying NMS Stock has entered into a Limit State or Straddle State. LULD Functionality remains in effect for the duration that the underlying NMS Stock is in a Limit State or a Straddle State.

"**Market Data Plan**" shall mean the effective national market system plans through which the Participants act jointly to disseminate consolidated information in compliance with Rule 603(b) of Regulation NMS under the Exchange Act.

"**Plan**" shall mean the Plan to Address Extraordinary Market Volatility Submitted to the SEC pursuant to Rule 608 of Regulation NMS under the Exchange Act, as amended from time to time in accordance with its provisions.

"**Primary Listing Exchange**" shall mean the Participant on which an NMS Stock is listed. If an NMS Stock is listed on more than one Participant, the Participant on which the NMS Stock has been listed the longest shall be the Primary Listing Exchange.

"**Processor**" shall mean the single plan processor responsible for the consolidation of information for an NMS Stock pursuant to Rule 603(b) of Regulation NMS under the Exchange Act.

"**Participant**" shall mean a party to the Plan.

"**Regular Trading Hours**" shall have the meaning provided in Rule 600(b)(64) of Regulation NMS under the Exchange Act. For purposes of the Plan, Regular Trading Hours can end earlier than 4:00 p.m. Eastern Time in the case of an early scheduled close.

"**Regulatory Halt**" shall have the meaning specified in the Market Data Plans.

"**Straddle State**" shall have the meaning provided in Section VII(A)(2) of the Plan. An NMS Stock is in a Straddle State when the National Best Bid (Offer) is below (above) the Lower (Upper) Price Band and the NMS Stock is not in a Limit State, and trading in that NMS Stock deviates from normal trading characteristics such that declaring a Trading Pause would support the Plan's goal to address extraordinary market volatility.

"**Trading Pause**" shall have the meaning provided in Section VII of the Plan. If trading for an NMS Stock does not exit a Limit State within 15 seconds of entry during Regular Trading Hours, then the Primary Listing Exchange will declare a Trading Pause for such NMS Stock and shall notify the Processor. The Primary Listing Exchange may also declare a Trading Pause for an NMS Stock when an NMS Stock is in a Straddle State.

(b) **General.** LULD Functionality becomes effective for an option traded on the Exchange when the underlying NMS Stock has entered into a Limit State or Straddle State. LULD Functionality remains in effect for the duration that the underlying NMS Stock is in a Limit State or a Straddle State. LULD Functionality modifies the normal operation of the Exchange System in ways identified by this Rule. LULD Functionality ends when the underlying NMS Stock is no longer in a Limit State or a Straddle State, or when a Trading Pause is declared by the Primary Listing Exchange.

(c) **Determining Straddle States and Limit States.** The Exchange shall use the SIP feed (CQS for Tape A and Tape B securities and UQDF for Tape C securities) to determine when an NMS Stock is in a Limit State or a Straddle State, and when such Limit State or Straddle State no longer exists.

(d) **Handling of Orders During Limit States and Straddle States.** Once an NMS Stock has entered either a Straddle State or Limit State:

(1) The Exchange will not open an affected option.

(2) After the opening, the Exchange will:

(i) reject all incoming market orders submitted into the Exchange System.

(ii) cancel all unexecuted market orders existing within the Exchange System, except that market orders to sell an option received when the national best bid is zero and the Exchange's disseminated offer is equal to or less than $0.10 that have been converted to limit orders to sell pursuant to Rule 519(a)(1) will not be cancelled by the Exchange's System.

(e) **Market-Wide Trading Halts.** The Exchange shall halt trading in all options whenever the equities markets initiate a market-wide trading halt commonly known as a circuit breaker in response to extraordinary market conditions.

(f) **Quoting Obligations During Limit States and Straddle States**

(1) Once an NMS Stock has entered either a Limit or Straddle State, the Exchange shall relieve Exchange Market Makers from the following quotation obligations for options on the affected underlying NMS Stock:

(i) the minimum size requirement set forth in Exchange Rule 605(a);

(ii) the requirement to submit two-sided quotes set forth in Exchange Rule 605(b); and

(iii) the continuous quoting obligation set forth in Exchange Rule 605(d).

(2) The relief described in subparagraphs (f)(1)(i)-(iii) above shall terminate when the Limit or Straddle State no longer exists in the affected NMS Stock.

(3) The provisions of Exchange Rule 514 concerning priority on the Exchange shall remain unchanged during periods of relief from quoting obligations pursuant to this Rule 530(f).

(g) **Systemic Changes During Limit States and Straddle States.** Once an NMS Stock has entered a Limit or Straddle State, the Exchange shall apply the following LULD Functionality for options on the affected underlying NMS Stock during the Opening Process.

(1) The Exchange's Opening Process (as described in Rule 503) shall be delayed for options overlying an NMS Stock that is in a Limit or Straddle State prior to the opening of trading such overlying options. The Opening Process shall begin in the affected overlying options when such Limit or Straddle State has ended and there is not a halt or Trading Pause in effect.

(2) Respecting options that are engaged in the Opening Process but for which trading has not begun, the Opening Process shall be terminated when the underlying NMS Stock is in a Limit or Straddle State. The Opening Process shall begin anew in the affected overlying options when such Limit or Straddle State has ended and there is not a halt or Trading Pause in effect.

(h) **Trading Pauses.** When an underlying NMS Stock is subject to a Trading Pause, the Exchange System will halt trading in options overlying the affected NMS Stock pursuant to Rule 504(c).

(i) **Opening after a Trading Pause.** After a Trading Pause, the Exchange System will open trading in the affected option pursuant to Rule 503. If trading has not resumed on the Primary Listing Exchange for the affected NMS Stock within ten minutes of receipt of the Trading Pause message by the Exchange, the Exchange may resume trading in options overlying such NMS Stock if at least one exchange has resumed trading in such NMS Stock.

(j) **Review of Erroneous Transactions Occurring During Limit States and Straddle States.** Once an NMS Stock has entered a Limit or Straddle State, the Exchange shall nullify a transaction in an option overlying such an NMS Stock as provided in this Rule.

(1) Absent Mutual Agreement as provided in paragraph (j)(2)(iii) below, parties to a trade may have a trade nullified if:

(i) any such party makes a documented request within the time specified in Rule 530(j)(2)(i)(A); and

(ii) one of the conditions below is met:

(A) The trade resulted from a verifiable disruption or malfunction of an Exchange execution, dissemination, or communication system that caused a quote/order to trade in excess of its disseminated size (e.g. a quote/order that is frozen, because of an Exchange System error, and repeatedly traded) in which case trades in excess of the disseminated size may be nullified; or

(B) The trade resulted from a verifiable disruption or malfunction of an Exchange dissemination or communication system that prevented a Member from updating or canceling a quote/order for which the Member is responsible where there is Exchange documentation providing that the Member sought to update or cancel the quote/order; or

(C) The trade resulted from an erroneous print disseminated by the underlying market which is later cancelled or corrected by the underlying market where such erroneous print resulted in a trade higher or lower than the average trade in the underlying security during the time period encompassing two minutes before and after the erroneous print, by an amount at least five times greater than the average quote width for such underlying security during the time period encompassing two minutes before and after the erroneous print. For purposes of this Rule, the average trade in the underlying security shall be determined by adding the prices of each trade during the four minute time period referenced above (excluding the trade in question) and dividing by the number of trades during such time period (excluding the trade in question); or

(D) The trade resulted from an erroneous quote in the primary market for the underlying security that has a width of at least $1.00 and that width is at least five times greater than the average quote width for such underlying security during the time period encompassing two minutes before and after the dissemination of such quote. For the purposes of this Rule, the average quote width shall be determined by adding the quote widths of sample quotations at regular 15-second intervals during the four minute time period referenced above (excluding the quote in question) and dividing by the number of quotes during such time period (excluding the quote in question);

(iii) **Mutual Agreement**. The determination as to whether a trade was automatically executed at an erroneous price may be made by mutual agreement of the affected parties to a particular transaction within the time periods specified in subparagraphs (j)(2)(i) or (j)(3) below. A trade may be nullified on the terms that all parties to a particular transaction agree. In the absence of mutual agreement by the parties, a particular trade may only be nullified as provided in this Rule.

(iv) **Trading Halts**. Trades on the Exchange will be nullified when:

(A) The trade occurred during a trading halt in the affected option on the Exchange; or

(B) Respecting equity options (including options overlying ETFs), the trade occurred during a trading halt on the primary market for the underlying security.

(v) **Transactions During Opening Purchase Prohibitions or Restrictions.** Trades on the Exchange will be nullified when such a trade represents an opening transaction prohibited pursuant to Rule 403.

(2) **Review Procedure**. MIAX PEARL Regulatory Control ("MRC") shall administer the application of this Rule as follows:

(i) (A) **Notification**. If a Market Maker on the Exchange believes that he/she participated in a transaction that can be nullified pursuant to section (j) of this Rule, he/she must notify MRC within fifteen minutes of the transaction. If a Member that initiated the order believes a transaction on the Exchange can be nullified pursuant to section (j) of this Rule, such Member must notify MRC within twenty minutes of the execution. Absent unusual circumstances, MRC will not grant relief under this Rule unless notification is made within the prescribed time period. Notwithstanding the foregoing, respecting transactions that occur as part of the Exchange's automated Opening Process, after the twenty minute notification period as described above and until 4:30 p.m. Eastern Time on the subject trade date, where parties to the transaction are a non-broker-dealer customer and an Exchange Market Maker, the non-broker-dealer customer may request review of the subject transaction, and the transaction will nullified by an Exchange Official.

(B) **Procedures for Reviewing Trades on Exchange Motion**. In the interest of maintaining a fair and orderly market for the protection of investors, the Chief Regulatory Officer or designee thereof, who is an officer of the Exchange (collectively "Exchange Officer") may, on his or her own motion or upon request, determine to review any transaction occurring on the Exchange that is believed to be erroneous. A transaction reviewed pursuant to this provision may be nullified in accordance with section (j) of this Rule. The Exchange Officer may be assisted by an Exchange Official in reviewing a transaction.

The Exchange Officer shall act as soon as possible after receiving notification of the transaction, and ordinarily would be expected to act on the same day as the transaction occurred. In no event shall the Exchange Officer act later than 9:30 a.m. Eastern Time on the next trading day following the date of the transaction in question. A party affected by a determination to nullify a transaction pursuant to this provision may appeal such determination in accordance with Rule 530; however, a determination by an Exchange Officer not to review a transaction, or a determination not to nullify a transaction for which a review was requested or conducted, is not appealable. If a transaction is reviewed and a determination is rendered pursuant to another provision of Rule 530, no additional relief may be granted under this provision.

(ii) **Bust**. An Exchange Official will determine whether there is a trade that qualifies to be nullified as defined in this Rule.

(3) **Request for Review**. If a party affected by a determination made under this Rule so requests within the time permitted, the CRO will review decisions made under this Rule. A request for review under this paragraph must be made within thirty minutes after a party receives official notification of a final determination by the Exchange Official under this Rule, except that if such notification is made after 3:30 p.m. Eastern Time, either party has until 9:30 a.m. Eastern Time on the next trading day to request a review. Such a request for review must be in writing or otherwise documented. The CRO shall review the facts and render a decision on the day of the transaction, or the next trade day in the case where a request is properly made after 3:30 p.m. Eastern Time on the day of the transaction or where the request is properly made the next trade day.

(i) **Absence of the CRO**. In the absence of the CRO, the deputy CRO or designee of the CRO will be appointed to act in this capacity.

(ii) **Appeal Fee**. A Member seeking the CRO's review of an Exchange Official ruling shall be assessed a fee of $250.00 for each Exchange Official ruling to be reviewed that is sustained and not overturned or modified by the CRO.

(iii) **Authority of the CRO**. Decisions of the CRO concerning (i) the review of Exchange Official rulings relating to the nullification of transactions, and (ii) initial requests for relief shall be final and may not be appealed to the Exchange's Board.

[Adopted: December 13, 2016; amended April 5, 2019 (SR-PEARL-2019-14)]

CHAPTER VI. MARKET MAKERS

Rule 600. Market Maker Registration

Members registered as Market Makers have certain rights and bear certain responsibilities beyond those of other Members. All Market Makers are designated as specialists on the Exchange for all purposes under the Exchange Act or Rules thereunder.

(a) To register as a Market Maker, a Member must file an application in writing on such forms as the Exchange may prescribe. The Exchange reviews applications and considers an applicant's market making ability and such other factors as the Exchange deems appropriate in determining whether to approve an applicant's registration as a Market Maker.

(b) The registration of any Member as a Market Maker may be suspended or terminated by the Exchange upon a determination that such Member has failed to properly perform as a Market Maker.

(c) These Rules place no limit on the number of qualifying entities that may become Market Makers.

(d) Applications shall be reviewed by the Exchange, which shall consider such factors including, but not limited to capital, operations, personnel, technical resources, and disciplinary history. Each Market Maker must have and maintain minimum net capital of at least the amount required under Rule 15c3-1 of the Exchange Act.

(e) An applicant's registration as a Market Maker shall become effective upon receipt by the Member of notice of an approval of registration by the Exchange.

(f) The registration of a Market Maker may be suspended or terminated by the Exchange if the Exchange determines that:

(1) The Market Maker has substantially or continually failed to engage in dealings in accordance with Rule 604 (Obligations of Market Makers) or elsewhere in these Rules;

(2) The Market Maker has failed to meet the minimum net capital conditions set forth under paragraph (d) above;

(3) The Market Maker has failed to maintain fair and orderly markets; or

(4) The Market Maker does not have at least one registered MMAT (as defined in Rule 601(a)(1)) qualified to perform market making activities as set forth in Rule 601(b)(5). A MMAT whose registration is suspended pursuant to this paragraph (f) shall not be deemed qualified within the meaning of this subsection.

(g) Any registered Market Maker may withdraw its registration by giving written notice to the Exchange. The Exchange may require a certain minimum prior notice period for withdrawal, and may place such other conditions on withdrawal and re-registration following withdrawal, as it deems appropriate in the interests of maintaining fair and orderly markets.

(h) Any person aggrieved by any determination under this Rule 600 or Rule 601 below may seek review under Chapter XI of these Rules governing adverse action.

(i) Market Makers are designated as dealers on the Exchange for all purposes under the Exchange Act and the rules and regulations thereunder.

[Adopted: December 13, 2016]

Rule 601. Obligations of Market Maker Authorized Traders

(a) **General.**

(1) A "Market Maker Authorized Trader" or "MMAT" is a person who is permitted to perform market making activities pursuant to Chapter VI on behalf of a Market Maker.

(2) MMATs are permitted to enter orders only for the account of the Market Maker for which they are registered.

(b) **Registration of Market Maker Authorized Traders**. The Exchange may, upon receiving an application in writing from a Market Maker on a form prescribed by the Exchange, register a person as an MMAT.

(1) MMATs may be officers, partners, employees or other associated persons of Members that are registered with the Exchange as Market Makers.

(2) To be eligible for registration as an MMAT, a person must successfully complete proficiency examinations and continuing education requirements applicable to individual Members and individual associated persons of Members, as set forth in Interpretation and Policy .04 to Rule 203, and any other training and/or certification programs as may be required by the Exchange.

(3) The Exchange may require a Market Maker to provide any and all additional information the Exchange deems necessary to establish whether registration should be granted.

(4) The Exchange may grant a person conditional registration as an MMAT subject to any conditions it considers appropriate in the interests of maintaining a fair and orderly market.

(5) A Market Maker must ensure that an MMAT is properly qualified to perform market making activities, including but not limited to ensuring the MMAT has met the requirements set forth in paragraph (b)(2) of this Rule.

(c) **Suspension or Withdrawal of Registration**.

(1) The Exchange may suspend or withdraw the registration previously given to a person to be an MMAT if the Exchange determines that:

(i) the person has caused the Market Maker to fail to comply with the securities laws, rules and regulations or the By-Laws, Rules and procedures of the Exchange;

(ii) the person is not properly performing the responsibilities of an MMAT;

(iii) the person has failed to meet the conditions set forth under paragraph (b) above; or

(iv) the MMAT has failed to maintain fair and orderly markets.

(2) If the Exchange suspends the registration of a person as an MMAT, the Market Maker must not allow the person to submit orders into the System.

(3) The registration of an MMAT will be withdrawn upon the written request of the Member for which the MMAT is registered. Such written request shall be submitted on the form prescribed by the Exchange.

[Adopted: December 13, 2016; amended April 3, 2017 (SR-PEARL-2017-11)]

Rule 602. Continuing Market Maker Registration

(a) A Member that has qualified as a Market Maker may register to make markets in individual series of options.

(b) A Market Maker may become registered in a series by entering a registration request via (i) the MEO interface, which requires series registration to be submitted prior to 9:00 a.m. Eastern Time of the current trading day, which registration request shall be submitted for every requested trading day, or (ii) an Exchange approved electronic interface, which requires series registration to be submitted prior to 6:00 p.m. Eastern Time of the business day immediately preceding the next trading day, which registration request shall persist until it is withdrawn. Registration shall become effective on the day the registration request is entered.

[Adopted: December 13, 2016; amended May 14, 2018 (SR-PEARL-2018-11)]

Rule 603. Good Standing for Market Makers

(a) To remain in good standing as a Market Maker, the Market Maker must:

(1) Continue to meet the requirements established in SEC Rule 15c3-1, and the general Membership requirements set forth in the Chapter II of these Exchange Rules and the requirements for Market Makers as set forth in Rule 600 (Market Maker Registration);

(2) continue to satisfy the Market Maker qualification requirements specified by the Exchange, as amended from time to time by the Exchange;

(3) comply with the Exchange Rules as well as the Rules of the OCC and the Federal Reserve Board; and

(4) pay on a timely basis such Membership, transaction and other fees as the Exchange shall prescribe.

(b) The good standing of a Market Maker may be suspended, terminated or otherwise withdrawn, as provided in the Exchange Rules, if any of said conditions for approval cease to be maintained or the Market Maker violates any of its agreements with the Exchange or any of the provisions of the Exchange Rules.

[Adopted: December 13, 2016]

Rule 604. Obligations of Market Makers

(a) In registering as a Market Maker, a Member commits himself to various obligations. Transactions of a Market Maker in its market making capacity must constitute a course of dealings reasonably calculated to contribute to the maintenance of a fair and orderly market, and Market Makers should not make bids or offers or enter into transactions that are inconsistent with such course of dealings. Ordinarily, Market Makers are expected to:

(1) During trading hours, a Market Maker must maintain a two-sided market, pursuant to Rule 605(d)(1), in those option series in which the Market Maker is registered to trade, in a manner that enhances the depth, liquidity and competitiveness of the market.

(2) Engage, to a reasonable degree under the existing circumstances, in dealings for their own accounts when there exists, or it is reasonably anticipated that there will exist, a lack of price continuity, a temporary disparity between the supply of (or demand for) a particular option contract, or a temporary distortion of the price relationships between option contracts of the same class.

(3) Compete with other Market Makers in all series in which the Market Maker is registered to trade.

(4) Make markets that will be honored for the number of contracts entered into the Exchange's System in all series of options in which the Market Maker is registered to trade.

(5) Update quotations in response to changed market conditions in all series of options in which the Market Maker is registered to trade.

(6) Maintain active markets in all series in which the Market Maker is registered.

(b) Market Makers should not effect purchases or sales on the Exchange except in a reasonable and orderly manner.

(c) If the Exchange finds any substantial or continued failure by a Market Maker to engage in a course of dealings as specified in paragraph (a) of this Rule, such Market Maker will be subject to disciplinary action or suspension or revocation of registration in one or more of the securities in which the Market Maker is registered. Nothing in this Rule will limit any other power of the Board under these Rules, or procedures of the Exchange with respect to the registration of a Market Maker or in respect of any violation by a Market Maker of the provisions of this Rule.

[Adopted: December 13, 2016]

Rule 605. Market Maker Quotations

(a) **Size Associated with Quotes.** A Market Maker's bid and offer for a series of options contracts shall be accompanied by the number of contracts at that price the Market Maker is willing to buy or sell. The best bid and best offer entered by a Market Maker must have a size of at least one (1) contract.

(b) **Two-Sided Quotes.** A Market Maker that enters a bid (offer) in a series in which he is registered on the Exchange must enter an offer (bid).

(c) **Firm Quotes.**

(1) All quotes and orders entered into the System are firm under this Rule and Rule 602 of Regulation NMS under the Exchange Act ("Rule 602") for the number of contracts specified and according to the requirements of paragraph (a) above.

(2) Market Maker bids and offers are not firm under this Rule and Rule 602 if any of the circumstances provided in paragraph (b)(3) or (c)(4) of Rule 602 exist.

(d) **Continuous Quotes.** A Market Maker must enter continuous bids and offers for the options series to which it is registered, as follows:

(1) On a daily basis, a Market Maker must make markets consistent with the applicable quoting requirements specified in these Rules, on a continuous basis in at least seventy-five percent (75%) of the options series in which the Market Maker is registered.

(2) A Market Maker may be called upon by the Exchange to submit a single bid or offer or maintain continuous bids and offers in one or more of the series to which the Market Maker is registered whenever, in the judgment of the Exchange, it is necessary to do so in the interest of fair and orderly markets.

(3) A Market Maker shall be deemed to have fulfilled the "continuous" quoting requirement if the Market Maker provides two-sided quotes for 90% of the time that the Market Maker is required to provide quotes in an appointed option series on a given trading day, or such higher percentage as the Exchange may announce in advance. These obligations will apply to all of the Market Maker's appointed issues collectively, rather than on an issue-by-issue basis. Compliance with this obligation will be determined on a monthly basis. However, determining compliance with the continuous quoting requirement on a monthly basis does not relieve the Market Maker of the obligation to provide continuous two-sided quotes on a daily basis, nor will it prohibit the Exchange from taking disciplinary action against a Market Maker for failing to meet the continuous quoting obligation each trading day.

(4) If a technical failure or limitation of a System of the Exchange prevents the Market Maker from maintaining or communicating to the Exchange timely and accurate quotes in an options series, the duration of such failure shall not be considered in determining whether the Market Maker has satisfied the quoting standard with respect to that option series.

(5) The continuous quoting obligations set forth above: (i) shall be suspended during a trading halt, suspension, or pause in an option pursuant to Rule 504, and shall not re-commence until after the first regular way transaction on the primary market in the underlying security following such halt, suspension, or pause in the underlying security, as reported by the responsible single plan processor and trading has resumed in the halted option pursuant to Rule 503, and (ii) shall be suspended for the duration that an underlying NMS stock is in a Limit State or a Straddle State.

(6) Market Makers shall not be required to make two-sided markets pursuant to this Rule in any Quarterly Option Series, any adjusted option series, and any option series until the time to expiration for such series is less than nine months. Accordingly, the continuous quotation obligations set forth in this Rule shall not apply to Market Makers respecting Quarterly Option Series, adjusted option series, and series with an expiration of nine months or greater. For purposes of this subsection, an adjusted option series is an option series wherein, as a result of a corporate action by the issuer of the underlying security, one option contract in the series represents the delivery of other than 100 shares of underlying stock or Exchange-Traded Fund Shares.

(7) The Exchange may consider other exceptions to this continuous quoting obligation based on demonstrated legal or regulatory requirements or other mitigating circumstances.

(e) **Options Series Other Than Those in Which Registered**. The total number of contracts executed by a Market Maker in series in which it is not registered as a Market Maker shall not exceed twenty-five percent (25%) of the total number of all contracts executed by the Market Maker in any calendar quarter.

Interpretations and Policies:

.01 IOC orders from Market Makers will not be counted for the continuous quoting obligations set forth in paragraph (d) of this Rule 605.

[Adopted: December 13, 2016]

Rule 606. Securities Accounts and Orders of Market Makers

(a) **Identification of Accounts**. In a manner prescribed by the Exchange, each Market Maker shall file with the Exchange and keep current a list identifying all accounts for stock, options and related securities trading in which the Market Maker may, directly or indirectly, engage in trading activities or over which it exercises investment discretion. No Market Maker shall engage in stock, options or related securities trading in an account which has not been reported pursuant to this Rule.

(b) **Reports of Orders**. Each Market Maker shall, upon request and in the prescribed form, report to the Exchange every order entered by the Market Maker for the purchase or sale of (1) a security underlying options traded on the Exchange, or (2) a security convertible into or exchangeable for such underlying security, as well as opening and closing positions in all such securities held in each account reported pursuant to paragraph (a) of this Rule. The report pertaining to orders must include the terms of each order, identification of the brokerage firms through which the orders were entered, the times of entry or cancellation, the times report of execution were received and, if all or part of the order was executed, the quantity and execution price.

(c) **Joint Accounts**. No Market Maker shall, directly or indirectly, hold any interest or participate in any joint account for buying or selling any options contract unless each participant in such joint account is a Member and unless such account is reported to, and not disapproved by, the Exchange. Such reports in a form prescribed by the

Exchange shall be filed with the Exchange before any transaction is effected on the Exchange for such joint account. A participant in a joint account must:

(1) Be either a Market Maker or a Clearing Member that carries the joint account.

(2) File and keep current a completed application on such form as is prescribed by the Exchange.

(3) Be jointly and severally responsible for assuring that the account complies with all Exchange Rules.

(4) Not be a Market Maker registered to the same options classes to which the joint account holder is also registered as a Market Maker.

Interpretations and Policies:

.01 Reports of accounts and transactions required to be filed with the Exchange pursuant to this Rule relate only to accounts in which a Market Maker, as an individual, directly or indirectly controls trading activities or has a direct interest in the profits or losses of such account. Such reports would be required for accounts over which a Market Maker exercises investment discretion as well as a Market Maker's proprietary accounts.

[Adopted: December 13, 2016]

Rule 607. Letters of Guarantee

(a) **Required of Each Member**. No Member shall make any transactions on the Exchange unless a Letter of Guarantee has been issued for such Member by a Clearing Member and filed with the Exchange, and unless such Letter of Guarantee has not been revoked pursuant to paragraph (c) of this Rule.

(b) **Terms of Letter of Guarantee**. A Letter of Guarantee shall provide that the issuing Clearing Member accepts financial responsibilities for all the Exchange Transactions made by the guaranteed Member.

(c) **Revocation of Letter of Guarantee**. A Letter of Guarantee filed with the Exchange shall remain in effect until a written notice of revocation has been filed with the Exchange by the Guarantor Clearing Member. A revocation shall in no way relieve a Clearing Member of responsibility for transactions guaranteed prior to the effective date of such revocation.

[Adopted: December 13, 2016]

Rule 608. Financial Requirements for Market Makers

(a) Each Market Maker shall maintain (i) net liquidating equity in its Market Maker account of not less than $200,000, and in conformity with such guidelines as the Board may establish from time to time, and (ii) net capital sufficient to comply with the requirements of Exchange Act Rule 15c3-1. Each Market Maker which is a Clearing Member shall also maintain net capital sufficient to comply with the requirements of the Clearing Corporation. This equity requirement, as well as all other provisions of the section (including capital maintenance requirements), applies to each Market Maker account, without regard to the number of Market Maker accounts per firm. The term "net liquidating equity" means the sum of positive cash balances and long securities positions less negative cash balances and short securities positions.

(b) Each Market Maker that makes an arrangement to finance his transactions as a Market Maker must identify in writing to the Exchange the source of the financing and its terms. The Exchange must be informed immediately of the intention of any party to terminate or change any such arrangement.

[Adopted: December 13, 2016]

CHAPTER VII. EXERCISES AND DELIVERIES

The rules contained in MIAX Chapter VII, as such rules may be in effect from time to time (the "Chapter VII Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter VII, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter VII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter VII Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in the Chapter VII Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in Chapter VII shall be read to refer to the MIAX PEARL Rule; the defined term "Clearing Member" in the Chapter VII Rules shall be read to refer the MIAX PEARL Clearing Member; and the defined term "Member" in the Chapter VII Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended September 27, 2017 (SR-MIAX-2017-39); amended November 15, 2017 (SR-MIAX-2017-43); amended February 2, 2018 (SR-MIAX-2018-01); amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER VIII. RECORDS, REPORTS AND AUDITS

The rules contained MIAX Chapter VIII, as such rules may be in effect from time to time (the "Chapter VIII Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter VIII, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter VIII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter VIII Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or exhaustion: the defined term "Exchange" in the Chapter VIII Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter VIII Rules shall be read to refer to the MIAX PEARL Rule; the defined term "Market Maker" in the Chapter VIII Rules shall be read to refer to the MIAX PEARL Market Maker; and the defined term "Member" in the Chapter VIII Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended April 3, 2017 (SR-PEARL-2017-11); amended August 18, 2017 (SR-MIAX-2017-35); amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER IX. SUMMARY SUSPENSION

The rules contained in MIAX Chapter IX, as such rules may be in effect from time to time (the "Chapter IX Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter IX, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter IX Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter IX Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange in the Chapter IX Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in Chapter IX Rules shall be read to refer to the MIAX PEARL Rule; the defined term "Board" in the Chapter IX Rules shall be read to refer to the MIAX PEARL Board; and the defined term "Member" in the Chapter IX Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER X. DISCIPLINE

Rule 1000. Disciplinary Jurisdiction

(a) A Member or a person associated with a Member who is alleged to have violated or aided and abetted a violation of any provision of the Exchange Act, the rules and regulations promulgated thereunder, or any provision of the Rules or any interpretation thereof or resolution of the Board of the Exchange regulating the conduct of business on the Exchange, shall be subject to the disciplinary jurisdiction of the Exchange under this Chapter, and after notice and opportunity for a hearing may be appropriately disciplined by expulsion, suspension, limitation of activities, functions, and operations, fine, censure, being suspended or barred from being associated with a Member or any other fitting sanction, in accordance with provisions of this Chapter.

(b) Persons associated with a Member may be charged with any violation committed by employees under his supervision or by the Member as though such violation were his own. A Member may be charged with any violation committed by its employees or other person who is associated with such Member, as though such violation were its own.

(c) Any Member or person associated with a Member shall continue to be subject to the disciplinary jurisdiction of the Exchange following such Member's termination or the person's termination of association with a Member with respect to matters that occurred prior to such termination; provided that written notice of the commencement of an inquiry into such matters is given by the Exchange to such former Member or former associated person within one (1) year of receipt by the Exchange, or such other exchange or association recognized for purposes of Rule 1302, of the latest written notice of the termination of such person's status as a Member or person associated with a Member. The foregoing notice requirement does not apply to a person who at any time after a termination again subjects himself to the disciplinary jurisdiction of the Exchange by becoming a Member or a person associated with a Member.

[Adopted: December 13, 2016]

Rule 1001. Requirement to Furnish Information

(a) Each Member and person associated with a Member shall be obligated upon request by the Exchange (including by another SRO acting on behalf of the Exchange pursuant to Rule 1015) to appear and testify, and to respond in writing to interrogatories and furnish documentary materials and other information requested in connection with (i) an investigation initiated pursuant to Rule 1002, (ii) a hearing or appeal conducted pursuant to this Chapter or preparation by the Exchange in anticipation of such a hearing or appeal, or (iii) an Exchange inquiry resulting from an agreement entered into by the Exchange pursuant to Rule 805.

(b) A Member or person associated with a Member is entitled to be represented by counsel during any such Exchange investigation, proceeding or inquiry.

(c) No Member or person associated with a Member shall impede or delay an Exchange investigation or proceeding conducted pursuant to this Chapter, or an Exchange inquiry pursuant to Rule 805, nor refuse to comply with a request made by the Exchange pursuant to this paragraph.

(d) Failure to furnish testimony, documentary evidence or other information requested by the Exchange in the course of an Exchange inquiry, investigation, hearing or appeal conducted pursuant to this Chapter, or in the course of preparation by the Exchange in anticipation of such a hearing or appeal, on the date or within the time period the Exchange specifies shall be deemed to be a violation of this Rule.

[Adopted: December 13, 2016]

Rule 1002. Investigation

The Exchange's regulatory staff (including regulatory staff of another SRO acting on the Exchange's behalf pursuant to Rule 1015), which is obligated to act independently from the economic interests of the Members regulated by the Exchange, has sole discretion to investigate possible violations within the disciplinary jurisdiction of the Exchange on its own initiative or based upon a complaint alleging possible violations submitted by any person, Exchange committee or the Board. All complaints shall be in writing signed by the complainant and shall specify in reasonable detail the facts constituting the violation, including the specific statutes, rules, interpretations or resolutions allegedly violated.

[Adopted: December 13, 2016]

Rule 1003. Letters of Consent

In lieu of the procedures set forth in Rules 1004 through 1006 (Charges, Answer and Hearing), a matter may be disposed of through a letter of consent.

(a) A matter can only be disposed of through a letter of consent if regulatory staff and the Member or person(s) who is the subject of the investigation (the "Subject") are able to agree upon terms of a letter of consent. Such letter must be signed by the Subject and must set forth a stipulation of facts and findings concerning the Member's conduct, the violation(s) committed by the Member and the sanction(s) therefor.

(b) In the event that the Subject and the regulatory staff are able to agree upon a letter of consent, the staff shall submit the letter to the Chief Regulatory Officer. If the letter of consent is acceptable to the Chief Regulatory Officer, it shall be submitted to the Business Conduct Committee. In the event that the Member and the regulatory staff are unable to agree upon a letter of consent or if a proposed letter is not acceptable to the Chief Regulatory Officer, the staff may institute an action according to the procedures contained in Rule 1004. The Chief Regulatory Officer's decision to reject a letter of consent shall be final, and a Subject may not seek review thereof.

(c) If a letter of consent is submitted to and accepted by the Business Conduct Committee, the Exchange shall take no further action against the Subject respecting the matters that are the subject of the letter. If the letter of consent is rejected by the Business Conduct Committee, the matter shall proceed as though the letter had not been submitted. The Business Conduct Committee's decision to accept or reject a letter of consent shall be final, and a Subject may not seek review thereof.

[Adopted: December 13, 2016]

Rule 1004. Charges

(a) **Initiation of Charges.** Whenever it shall appear that there is probable cause for finding a violation within the disciplinary jurisdiction of the Exchange and that further proceedings are warranted, the regulatory staff shall prepare a statement of charges against the Member or associated person alleged to have committed a violation (the "Respondent") specifying the acts in which the Respondent is charged to have engaged and setting forth the specific provisions of the Exchange Act, rules and regulations promulgated thereunder, provisions of the Rules, or interpretations or resolutions of which such acts are in violation. If the statement of charges is approved by the Chief Regulatory Officer, a copy of the charges shall be served upon the Respondent in accordance with Rule 1012. The complainant, if any, shall be notified if further proceedings are warranted.

(b) **Access to Documents.** Provided that a Respondent has made a written request for access to documents described hereunder with sixty (60) calendar days after a statement of charges has been served upon the Respondent in accordance with Rule 1012, the Respondent shall have access to all documents concerning the case that are in the investigative file of the Exchange except for regulatory staff investigation and examination reports and any other materials prepared by the Exchange staff in connection with such reports or in anticipation of a disciplinary hearing. In providing such documents, the Exchange may protect the identity of a complainant.

[Adopted: December 13, 2016]

Rule 1005. Answer

(a) The Respondent shall have twenty-five (25) calendar days after service of the charges to file with the Secretary of the Exchange a written answer thereto. The answer shall specifically admit or deny each allegation contained in the charges, and the Respondent shall be deemed to have admitted any allegation not specifically denied. The answer may also contain any defense that the Respondent wishes to submit and may be accompanied by documents in support of his answer or defense. In the event the Respondent fails to file an answer, the charges shall be considered to be admitted.

(b) Upon review of the Respondent's answer, the Chief Regulatory Officer may modify the statement of charges, and a copy of the modified charges shall be served upon the Respondent in accordance with Rule 1012. If such modification asserts any new or materially different charges from those contained in the initial statement, Respondent shall have an additional twenty-five (25) calendar days after service of the modified statement of charges to file a written answer thereto in accordance with paragraph (a) above.

[Adopted: December 13, 2016]

Rule 1006. Hearing

(a) **Appointment of Hearing Panel**. Subject to Rule 1008 (Summary Proceedings), a hearing on the charges shall be held before a professional hearing officer and two members of the Business Conduct Committee (the "Panel"). The professional hearing officer shall serve as the chairman of the Panel (the "Panel Chairman").

(1) Promptly after the Respondent files a written answer to the statement of charges, the Chairman of the Business Conduct Committee shall select from among the persons on the Business Conduct Committee two (2) persons to serve on the Panel. In making such selection, the Chairman of the Business Conduct Committee shall, to the extent practicable, choose individuals whose background, experience and training qualify them to consider and make determinations regarding the subject matter to be presented to the Panel. He shall also consider such factors as the availability of individuals, the extent of their prior service on Panels and any relationship between an individual and the Respondent that might make it inappropriate for such person to serve on the Panel.

(2) If in the opinion of the Chairman of the Business Conduct Committee, there are not a sufficient number of persons on the Business Conduct Committee from which to select persons having the appropriate background, experience and training to consider and make determinations regarding the subject matter to be presented to that particular Panel, he shall request that the President temporarily appoint additional persons to the Business Conduct Committee from whom he may select for that Panel.

(3) If at any time a person serving on a Panel has a conflict of interest or bias or circumstances otherwise exist where his fairness might reasonably be questioned, the person must withdraw from the Panel. In the event that a person selected from the Business Conduct Committee withdraws, is incapacitated, or otherwise is unable to continue service after being selected, the Panel Chairman may, in the exercise of discretion, request that the Chairman of the Business Conduct Committee select a replacement. In the event that both persons selected from the Business Conduct Committee withdraw, are incapacitated, or otherwise are unable to continue service, the Chairman of the Business Conduct Committee shall select two replacements.

(b) **Parties.** The Exchange and the Respondent shall be the parties to the hearing. Where a Member is a party, it shall be represented at the hearing by an associated person.

(c) **Notice and List of Documents.** Parties shall be given at least twenty-eight (28) calendar days' notice of the time and place of the hearing. Not less than ten (10) calendar days in advance of the scheduled hearing date, each party shall furnish to the Panel and to the other parties, copies of all documentary evidence such party intends to present at the hearing. Where time and the nature of the proceeding permit, the parties shall meet with the Panel Chairman in a pre-hearing conference for the purpose of clarifying and simplifying issues and otherwise expediting the proceeding. At such pre-hearing conference, the parties shall attempt to reach agreement respecting authenticity of documents, facts not in dispute, and any other items that will serve to expedite the hearing of the matter.

(d) **Intervention.** Any person not otherwise a party may intervene as a party to the hearing upon demonstrating to the satisfaction of the Panel Chairman that he has an interest in the subject of the hearing and that the disposition of the matter may, as a practical matter, impair or impede his ability to protect that interest. Also, the Panel Chairman may in his discretion permit a person to intervene as a party to the hearing when the person's claim or defense and the main action have questions of law or fact in common. Any person wishing to intervene as a party to a hearing shall file with the Panel Chairman a notice requesting the right to intervene, stating the grounds therefor, and setting forth the claim or defense for which intervention is sought. The Panel Chairman, in exercising his discretion concerning intervention shall take into consideration whether the intervention will unduly delay or prejudice the adjudication of the rights of the original parties.

(e) **Conduct of Hearing.** The Panel Chairman shall determine the time and place of all meetings, and shall make all determinations with regard to procedural or evidentiary matters, as well as prescribe the time within which all documents, exhibits, briefs, stipulations, notices or other written materials must be filed where such is not specified in this Chapter. The Panel Chairman shall generally regulate the course of the hearing, and shall have the authority to, among other things, order the parties to present oral arguments, reopen a hearing prior to the issuance of a decision by the Panel, create and maintain the official record of proceeding, and draft a decision that represents the views of the majority of the Panel. Formal rules of evidence shall not apply to hearings conducted by the Panel. The charges shall be presented by a representative of the Exchange who, along with Respondent and any other party, may present evidence and produce witnesses who shall testify under oath and are subject to being questioned by the Panel and the other parties. The Panel may request the production of documentary evidence and witnesses. No Member or person associated with a Member shall refuse to furnish relevant testimony, documentary materials or other information requested by the Panel during the course of the hearing. The Respondent and intervening parties are entitled to be represented by counsel who may participate fully in the hearing. A transcript of the hearing shall be made and shall become part of the record. Interlocutory Board review of any decision made by the Panel prior to completion of the hearing is generally prohibited. Such interlocutory review shall be permitted only if the Panel agrees to such review after determining that the issue is a controlling issue of rule or policy and that immediate Board review would materially advance the ultimate resolution of the case.

(f) **Ex Parte Communication.** No Member or person associated with a Member shall make or knowingly cause to be made an ex parte communication with any member of the Panel, Business Conduct Committee or Board concerning the merits of any matter pending under this Chapter. No member of the Panel, Business Conduct Committee or Board shall make or knowingly cause to be made an ex parte communication with any Member or any person associated with a Member concerning the merits of any matter pending under this Chapter.

(1) "Ex parte communication" means an oral or written communication made without notice to all parties, that is, regulatory staff and Subjects of investigations or Respondents in proceedings.

(2) A written communication is ex parte unless a copy has been previously or simultaneously delivered to all interested parties. An oral communication is ex parte unless it is made in the presence of all parties except those who, on adequate prior notice, declined to be present.

[Adopted: December 13, 2016]

Rule 1007. Decision

(a) Following a hearing conducted pursuant to Rule 1006, the Panel shall by majority opinion, issue a decision in writing, based solely on the record, determining whether the Respondent has committed a violation and imposing the sanction, if any, therefor.

(b) The decision shall include a statement of findings and conclusions, with the reasons therefor, upon all material issues presented on the record. Where a sanction is imposed, the decision shall include a statement specifying the acts or practices in which the Respondent has been found to have engaged and setting forth the specific provisions of the Exchange Act, rules and regulations promulgated thereunder, provisions of the Rules, interpretations or resolutions of the Exchange of which the acts are deemed to be in violation.

(c) The Respondent shall be sent a copy of the decision promptly after it is rendered.

[Adopted: December 13, 2016]

Rule 1008. Summary Proceedings

Notwithstanding the provision of Rule 1006 (Hearing), a Panel may make a determination without a hearing and may impose a penalty as to violations that the Respondent has admitted or has failed to answer or that otherwise do not appear to be in dispute.

(a) Notice of such summary determination, specifying the violations and penalty, shall be served upon the Respondent, who shall have ten (10) calendar days from the date of service to notify the Panel Chairman that he desires a hearing upon all or a portion of any charges not previously admitted or upon the penalty. Failure to so notify the Panel Chairman shall constitute admission of the violations and acceptance of the penalty as determined by the Panel and a waiver of all rights of review.

(b) If the Respondent requests a hearing, the matters that are the subject of the hearing shall be handled as if the summary determination had not been made.

[Adopted: December 13, 2016]

Rule 1009. Offers of Settlement

(a) **Submission of Offer.** At any time during a period not to exceed 120 calendar days immediately following the date of service of a statement of charges upon the Respondent in accordance with Rule 1012, the Respondent may submit to the Panel, if one has been formed, a written offer of settlement, signed by him, which shall contain a proposed stipulation of facts and consent to a specified sanction. The Respondent may submit a written statement in support of the offer. If a Panel has not yet been appointed, a written offer of settlement may be submitted to the Chief Regulatory Officer.

(1) A Respondent shall be entitled to submit a maximum of two (2) written offers of settlement in connection with the statement of charges issued to that Respondent pursuant to Rule 1004, unless a Panel, in its discretion, permits a Respondent to submit additional offers of settlement.

(2) The 120-day period shall be tolled for the number of days in excess of seven (7) calendar days that it takes the Exchange regulatory staff to respond to a Respondent's request for access to documents provided that the request for access is made pursuant to the provisions and within the time frame provided in Rule 1004(b).

(b) **Acceptance or Rejection of Offer**. Where the Panel or Chief Regulatory Officer accepts an offer of settlement, it or he shall issue a decision, including findings and conclusions and imposing a sanction, consistent with the terms of such offer. Where the Panel or Chief Regulatory Officer rejects an offer of settlement, it or he shall notify the Respondent and the matter shall proceed as if such offer had not been made, and the offer and all documents relating

thereto shall not become a part of the record. Subject to Rule 1008 (Summary Proceedings), following the end of the 120-day period in paragraph (a) above or after a rejection of a Respondent's second offer of settlement, a hearing will proceed in accordance with the provisions of Rule 1006. A decision of the Panel or Chief Regulatory Officer issued upon acceptance of an offer of settlement, as well as the determination whether to accept or reject such an offer, shall be final, and the Respondent may not seek review thereof.

[Adopted: December 13, 2016]

Rule 1010. Review

(a) **Petition.** The Respondent or regulatory staff shall have fifteen (15) calendar days after service of notice of a decision made pursuant to Rule 1007 of this Chapter to petition for review thereof by the Board. Such petition shall be in writing and shall specify the findings and conclusions to which exceptions are taken, together with reasons for such exceptions. Any objections to a decision not specified by written exception shall be considered to have been abandoned. Petitions shall be filed with the Secretary of the Exchange.

(b) **Motion of Board.** The Board may on its own initiative order review of a decision made pursuant to Rule 1007 or 1008 (Summary Proceeding) within thirty (30) calendar days after notice of the decision has been served on the Respondent.

(c) **Conduct of Review.** The review shall be conducted by the Board or a committee of the Board composed of at least three Directors whose decision must be ratified by the Board.

(1) Any Director who participated in a matter may not participate in review of that matter by the Board.

(2) Unless the Board shall decide to open the record for the introduction of evidence or to hear argument, such review shall be based solely upon the record and the written exceptions filed by the parties.

(3) New issues may be raised by the Board, and in such event, Respondents and regulatory staff shall be given notice of an opportunity to address any such new issues.

(d) **Determination.** The Board may affirm, reverse or modify, in whole or in part, the decision of the Panel. Such modification may include an increase or decrease of the sanction. The decision of the Board shall be in writing, shall be promptly served on the Respondent, and shall be final.

[Adopted: December 13, 2016]

Rule 1011. Judgment and Sanction

(a) **Sanctions.** Members and persons associated with Members shall (subject to any rule or order of the SEC) be appropriately disciplined for violations under these Rules by expulsion, suspension, limitation of activities, functions and operations, fine, censure, being suspended or barred from being associated with a Member, or any other fitting sanction.

(b) **Effective Date of Judgment.** Sanctions imposed under this Chapter shall not become effective until the Exchange review process is completed or the decision otherwise becomes final. Pending effectiveness of a decision imposing a sanction on the Respondent, the person, committee or panel issuing the decision (the "adjudicator") may impose such conditions and restrictions on the activities of the Respondent as it considers reasonably necessary for the protection of investors and the Exchange.

(c) **Payment of Fines, Other Monetary Sanctions, or Costs; Summary Action for Failure to Pay.**

(1) **Payment to Chief Financial Officer.** All fines and other monetary sanctions shall be paid to the Chief Financial Officer of the Exchange.

(2) **Summary Suspension or Expulsion**. After seven (7) calendar days' notice in writing, the Exchange may (i) summarily suspend a Member that fails to pay promptly a fine, other monetary sanction or cost imposed pursuant to this Chapter when such fine, monetary sanction or cost becomes finally due and payable; or (ii) terminate immediately the association of a person who fails to pay promptly a fine, other monetary sanction or cost imposed pursuant to this Chapter when such fine, monetary sanction or cost becomes finally due and payable.

(d) **Costs of Proceedings**. A Member or person associated with a Member disciplined pursuant to this Chapter shall bear such costs of the proceeding as the adjudicator deems fair and appropriate under the circumstances.

[Adopted: December 13, 2016]

Rule 1012. Procedural Matters

(a) **Service of Notice.** Any charges, notices or other documents may be served upon a Member or associated person either personally or by leaving the same at his place of business, by registered or certified mail or overnight commercial carrier addressed to the Member or associated person at the Member's address as it appears on the books and records of the Exchange.

(b) **Extension of Time Limits.** Any time limits imposed under this Chapter for the submission of answers, petitions or other materials may be extended by permission of the authority to whom such materials are to be submitted.

[Adopted: December 13, 2016]

Rule 1013. Reporting to the Central Registration Depository

(a) With respect to formal Exchange disciplinary proceedings, the Exchange shall report to the CRD the issuance of a statement of charges pursuant to Rule 1004 and all significant changes in the status of such proceedings while such proceedings are pending.

(b) For purposes of reporting to the CRD:

(1) A formal Exchange disciplinary proceeding shall be considered to be pending from the time that a statement of charges is issued in such proceeding pursuant to Rule 1004 until the outcome of the proceeding becomes final.

(2) An Exchange disciplinary proceeding shall be considered to be a formal disciplinary proceeding if it is initiated by the Exchange pursuant to Rule 1002.

(3) Significant changes in the status of a formal Exchange disciplinary proceeding shall include, but not be limited to, the scheduling of a disciplinary hearing, the issuance of a decision by a Panel, the filing of an appeal to the Board, and the issuance of a decision by the Board.

[Adopted: December 13, 2016]

Rule 1014. Imposition of Fines for Minor Rule Violations

(a) **General**. In lieu of commencing a disciplinary proceeding, the Exchange may, subject to the requirements set forth herein, impose a fine, not to exceed $5,000, on any Member, or person associated with or employed by a Member, with respect to any Rule violation listed in section (d) of this Rule. Any fine imposed pursuant to this Rule that (i) does not exceed $2,500 and (ii) is not contested, shall be reported on a periodic basis, except as may otherwise be required by Rule 19d-1 under the Exchange Act or by any other regulatory authority. The Exchange is not required to impose a fine pursuant to this Rule with respect to the violation of any Rule included herein, and the Exchange

may, whenever it determines that any violation is not minor in nature, proceed under Rules 1003 or 1004, rather than under this Rule.

(b) **Notice**. Any person against whom a fine is imposed under this Rule (the "Subject") shall be served with a written statement setting forth (i) the Rule(s) allegedly violated; (ii) the act or omission constituting each such violation; (iii) the fine imposed for each violation; and (iv) the date by which such determination becomes final and such fine must be paid or contested as provided below, which date shall be not less than thirty (30) calendar days after the date of service of such written statement.

(c) **Review**. A Subject may contest the Exchange's determination by filing with the Office of the Secretary of the Exchange a written answer as provided in Rule 1005 on or before the date such fine must be paid.

(1) Upon the receipt of an answer by the Exchange the matter becomes subject to review by the Business Conduct Committee, or a subcommittee thereof consisting of at least three (3) members of the Business Conduct Committee.

(2) The answer must include a request for a hearing, if a hearing is desired. Formal rules of evidence shall not apply to hearings conducted by the Business Conduct Committee under this Rule. The Business Conduct Committee shall determine the time and place of the hearing and make all determinations with regard to procedural or evidentiary matters, as well as prescribe the time within which all documents or written materials must be submitted. The regulatory staff and the Subject may present evidence and produce witnesses who shall testify under oath and are subject to being questioned by the Business Conduct Committee and the other party. No Member or person associated with a Member shall refuse to furnish relevant testimony, documentary materials or other information requested by the Business Conduct Committee during the course of the hearing. The Subject is entitled to be represented by counsel who may participate fully in the hearing.

(3) If a hearing is not requested, the review will be based on written submissions and will be conducted in a manner to be determined by the Business Conduct Committee.

(4) If, after a hearing or review based on written submissions, the Business Conduct Committee determines that the Subject is guilty of the rule violation(s) alleged, the Committee may impose any one or more of the disciplinary sanctions authorized by the Exchange's Rules.

Unless the sole disciplinary sanction imposed by the Committee for such rule violation(s) is a fine that is less than the total fine initially imposed by the Exchange for the subject violation(s), the person charged shall pay a forum fee in the amount of $100 if the determination was reached without a hearing and $300 if a hearing was conducted.

(5) The regulatory staff, the Subject or the Board on its own motion may require a review by the Board of any determination by the Business Conduct Committee under this Rule by proceeding in the manner described in Rule 1010.

(6) In the event that a fine imposed pursuant to this Rule is subsequently upheld by the Business Conduct Committee or, if applicable, on appeal to the Board, such fine, plus all interest that has accrued thereon since the fine was due and any forum fee imposed pursuant to subparagraph (4) above, shall be immediately payable.

(d) **Violations Subject to Fines**. The following is a list of the rule violations subject to, and the applicable sanctions that may be imposed by the Exchange pursuant to, this Rule:

(1) **Position Limits (Rule 307).**

Number of Cumulative Violations Within Any Twenty-four Month Rolling Period*	Sanction (Imposed on Exchange Members or violations occurring in all other accounts)
First Offense	$500
Second Offense	$1,000
Third Offense	$2,500
Fourth and Each Subsequent Offense	$5,000

* A violation that consists of (i) a one trade date overage, (ii) a consecutive string of trade date overage violations where the position does not change or where a steady reduction in the overage occurs, or (iii) a consecutive string of trade date overage violations resulting from other mitigating circumstances, may be deemed to constitute one offense, provided that the violations are inadvertent.

(2) **Focus Reports (Rule 803).** Each Member shall file with the Exchange a report of financial condition on SEC Form X-17A-5 as required by Rule 17a-10 under the Exchange Act. Any Member who fails to file in a timely manner such report of financial condition pursuant to Exchange Act Rule 17a-10 shall be subject to the following fines:

Calendar Days Left	Sanction
1 to 30	$200
31 to 60	$400
61 to 90	$800
90 or more	Formal Disciplinary Action

(3) **Requests for Trade Data (Rule 804).** Any Member who fails to respond within ten (10) business days to a request by the Exchange for submission of trade data shall be subject to the following fines:

Business Days Late	Sanction
1 to 9	$200
10 to 15	$500
16 to 30	$1,000
Over 30	Formal Disciplinary Action

Any Member who violates this Rule more than one (1) time in any calendar year shall be subject to the following fines, which fines shall be imposed in addition to any sanction imposed pursuant to the schedule above:

Number of Violations Within One Calendar Year	Sanction
2nd Offense	$500
3rd Offense	$1,000
4th Offense	$2,500
Subsequent Offenses	Formal Disciplinary Action

(4) **Conduct and Decorum Policies**. The Exchange's trading conduct and decorum policies shall be distributed to Members periodically and shall set forth the specific dollar amounts that may be imposed as a fine hereunder with respect to any violations of those policies.

(5) **Order Entry (Rule 520).** Violations of Rule 520(b) regarding limitations on orders entered into the System by Electronic Exchange Members will be subject to the fines listed below. Each paragraph of Rule 520 subject to this Rule shall be treated separately for purposes of determining the number of cumulative violations.

Number of Violations Within One Calendar Year	Sanction
1 to 5	Letter of Caution
6 to 10	$500
11 to 15	$1,000
16 or 20	$2,000
Over 20	Formal Disciplinary Action

(6) **Execution of Orders in Appointed Options (Rule 605).** Violations of Rule 605(e), which specifies a limit on the total number of contracts executed during a quarter in options classes to which the Market Maker is not appointed shall be subject to the following sanctions:

Number of Violations Within Rolling Twelve Month Period	Sanction
1st Offense	Letter of Caution
2nd Offense	$500
3rd Offense	$1,000
4th Offense	$2,500
Subsequent Offenses	Formal Disciplinary Action

(7) **Mandatory Systems Testing (Rule 314).** Failure to conduct or participate in the testing of computer systems, or failure to provide required reports or maintain required documentation, shall be subject to the fines listed below.

Violations Within One Calendar Year	Sanction
First Violation	$250
Second Violation	$500
Third Violation	$1,000
Fourth Violation	$2,000
Fifth Violation or more	Formal Disciplinary Action

(8) **Exercise of Option Contracts (Rule 700).** Any Member who fails to submit to the Exchange in a timely manner pursuant to Rule 700 or a Regulatory Circular issued pursuant to Rule 700, "Advice Cancel", or exercise instruction relating to the exercise or non-exercise of a non-cash settled equity option shall be subject to the following fines:

Number of Cumulative Violations Within Any Twenty-Four Month Rolling Period	Individual	Member Organization
1st Offense	$500	$1,000
2nd Offense	$1,000	$2,500
Subsequent Offenses	$2,500	$5,000

(9) **Exercise Limits (Rule 309).** Violations of Rule 309 regarding the exercise within any five (5) consecutive business days of aggregate long positions in any class of options traded on the Exchange in excess of the limits outlined in Rule 309 shall be subject to the fines listed below:

Number of Cumulative Violations Within Any Twenty-Four Month Rolling Period	Sanction
First Violation	$500
Second Violation	$1,000
Third Violation	$2,500
Subsequent Violation	$5,000

(10) **Reports Related to Position Limits (Rule 310).** Violations of Rule 310 regarding the failure to accurately report position and account information shall be subject to the fines listed below:

Number of Cumulative Violations Within Any Twenty-Four Month Rolling Period	Sanction
First Violation	$500
Second Violation	$1,000
Third Violation	$2,500
Subsequent Violation	$5,000

(11) **Trading in Restricted Classes (Rule 403).** Violations of Rule 403 of entering into an opening transaction in a restricted class shall be subject to the following sanctions:

Number of Cumulative Violations Within Any Twenty-Four Month Rolling Period	Sanction
1st Offense	$500
2nd Offense	$2,500
3rd Offense	$5,000
Subsequent Offense	Formal Disciplinary Action

(12) **Market Maker Quotations (Rule 605).** Violations of Rule 605(d) regarding continuous quoting requirements shall be subject to the fines listed below. Violations of the rule that continue over consecutive trading days will be subject to a separate fine, pursuant to this paragraph (d)(12), for each day during which the violation occurs and is continuing up to a limit of fifteen consecutive trading days. In calculating fine thresholds for each Market Maker, all violations occurring within the Period in any of the Market Makers registered series are to be added together.

Number of Cumulative Violations Within Any Twenty-Four Month Rolling Period	Sanction
1st Offense	Letter of Caution
Subsequent Offense	$300 per day

(13) **Failure to Timely File Amendments to Form U4, Form U5, and Form BD (Rules 1301, 1302, and 1303).** Any Member and/or Member Organization that is required to file Form U4, Form U5, or Form BD pursuant to the Rules, or the Securities and Exchange Act of 1934, and the rules promulgated thereunder, is required to amend the applicable Form U4, Form U5, or Form BD to keep such forms current at all times. Members and/or Member Organizations shall amend Form U4, Form U5, or Form BD no later than thirty (30) days after the filer knew of or should have known of the need for the amendment.

Number of Cumulative Violations Within Any Twelve Month Rolling Period	Sanction
1st Offense	$500
2nd Offense	$1,000
3rd Offense	$2,000
Subsequent Offense	Formal Disciplinary Action

[Adopted: December 13, 2016]

Rule 1015. Disciplinary Functions

(a) The Exchange may contract with another SRO to perform some or all of the Exchange's disciplinary functions. In that event, the Exchange shall specify to what extent the Rules in this Chapter shall govern Exchange disciplinary actions and to what extent the rules of the other SRO shall govern such actions. Notwithstanding the fact that the Exchange may contract with another SRO to perform some or all of the Exchange's disciplinary functions, the Exchange shall retain ultimate legal responsibility for and control of such functions.

Interpretations and Policies:

.01 The Exchange has entered into a contract with the Financial Industry Regulatory Authority ("FINRA") to provide professional hearing officers and to act as an agent of the Exchange with respect to the disciplinary procedures contained in this Chapter. All of the Rules in this Chapter shall govern Exchange disciplinary actions. Under Rule 1006(a), the professional hearing officer is designated as the Chairman of the Panel. Under Rule 1006(e), the Panel Chairman has the sole responsibility to determine the time and place of all meetings of the Panel, and make all determinations with regard to procedural or evidentiary matters, as well as prescribe the time within which all documents, exhibits, briefs, stipulations, notices or other written materials must be filed where such is not specified in the Rules.

In the course of discharging his responsibilities hereunder, the professional hearing officer shall apply the standards contained in the FINRA Industry Code of Procedure, and policies, practices and interpretations thereof, so long as the Rules in this Chapter are not in conflict.

[Adopted: December 13, 2016]

Rule 1016. Contracts of Suspended Members

(a) When a Member, other than a Clearing Member, is suspended pursuant to Chapter IX (Summary Suspension), all open short positions of the suspended Member in option contracts and all open positions resulting from exercise of option contracts, other than positions that are secured in full by a specific deposit or escrow deposit in accordance with the Rules of the Clearing Corporation, shall be closed without unnecessary delay by all Members carrying such positions for the account of the suspended Member; provided that the Exchange may cause the foregoing requirement to be temporarily waived for such period as it may determine if it shall deem such temporary waiver to be in the interest of the public or the other Members of the Exchange.

(b) No temporary waiver hereunder by the Exchange shall relieve the suspended Member of its obligations or of damages, nor shall it waive the close out requirements of any other Rules.

(c) When a Clearing Member is suspended pursuant to Chapter IX (Summary Suspension) of these Rules, the positions of such Clearing Member shall be closed out in accordance with the Rules of the Clearing Corporation.

[Adopted: December 13, 2016]

Rule 1017. Failure to Pay Premium

(a) If the Clearing Corporation shall reject an Exchange Transaction because of the failure of the Clearing Member acting on behalf of the purchaser to pay the aggregate premiums due thereon as required by the Rules of the Clearing Corporation, the Member acting as or on behalf of the writer shall have the right either to cancel the transaction by giving notice thereof to the Clearing Member or to enter into a closing writing transaction in respect of the same option contract that was the subject of the rejected Exchange Transaction for the account of the defaulting Clearing Member.

(b) Such action shall be taken as soon as possible and in any event not later than 10:00 a.m. Eastern Time on the business day following the day the Exchange Transaction was rejected by the Clearing Corporation.

[Adopted: December 13, 2016]

Rule 1018. Expedited Suspension Proceeding

(a) **Initiation of Proceeding.**

(1) **Scope of Authority**. With the prior written authorization of the Chief Regulatory Officer ("CRO") or such other senior officers as the CRO may designate, the Exchange may initiate an expedited suspension proceeding with respect to alleged violations of Rule 322 (Disruptive Quoting and Trading Activity Prohibited).

(2) **Service of Notice**. The Exchange shall initiate the proceeding by serving a notice on a Member or associated person of a Member (hereinafter "Respondent"). The Exchange shall serve the notice by personal service or overnight commercial courier. The notice shall be effective upon service.

(3) **Content of Notice**. The notice shall state whether the Exchange is requesting the Respondent to be required to take action or to refrain from taking action. The notice shall be accompanied by:

(i) a declaration of facts, signed by a person with knowledge of the facts contained therein, that specifies the acts that constitute the alleged violation; and

(ii) a proposed order that contains the required elements of a suspension order (except the date and hour of the order's issuance), which are set forth in sub-paragraph (d)(2) of this Rule.

(b) **Appointment of Hearing Panel and Panel Members.**

(1) As soon as practicable after the Exchange initiates a suspension proceeding, a Hearing Panel shall be assigned in accordance with paragraph (a) of Rule 1006.

(2) If at any time a Panel Member determines that he or she has a conflict of interest or bias or circumstances otherwise exist where his or her fairness might reasonably be questioned, or if a Party files a motion to disqualify a Panel Member, the recusal and disqualification proceeding shall be conducted in accordance with Rule 1006(a)(3), except that:

(i) a motion seeking disqualification of a Panel Member must be filed no later than 5 days after the announcement of the Hearing Panel; and

(ii) the Exchange may file a brief in opposition to the Respondent's motion no later than 5 days after service thereof.

(c) **Hearing.**

(1) **When Held**. The hearing shall be held not later than 15 days after service of the notice initiating the suspension proceeding, unless otherwise extended by the Chairman of the Hearing Panel with the consent of the Parties for good cause shown. If a Panel Member is recused or disqualified, the hearing shall be held not later than five days after a replacement Panel Member is appointed.

(2) **Service of Notice of Hearing**. A notice of date, time, and place of the hearing shall be served on the Parties not later than seven days before the hearing, unless otherwise ordered by the Chairman of the Hearing Panel. Service shall be made by personal service or overnight commercial courier. The notice shall be effective upon service.

(3) **Authority of Panel Members**. A Panel Member shall have authority to do all things necessary and appropriate to discharge his or her duties as set forth in Rule 1006.

(4) **Witnesses**. A person who is subject to the jurisdiction of the Exchange shall testify under oath or affirmation. The oath or affirmation shall be administered by a court reporter or a notary public.

(5) **Additional Information**. At any time during its consideration, the Hearing Panel may direct a Party to submit additional information. Any additional information submitted shall be provided to all Parties at least one day before the Hearing Panel renders its decision.

(6) **Transcript**. The hearing shall be recorded by a court reporter and a written transcript thereof shall be prepared. A transcript of the hearing shall be available to the Parties for purchase from the court reporter at prescribed rates. A witness may purchase a copy of the transcript of his or her own testimony from the court reporter at prescribed rates. Proposed corrections to the transcript may be submitted by affidavit to the Hearing Panel within a reasonable time determined by the Hearing Panel. Upon notice to all the Parties to the proceeding, the Hearing Panel may order corrections to the transcript as requested or sua sponte.

(7) **Record and Evidence Not Admitted**. The record shall consist of the notice initiating the proceeding, the declaration, and the proposed order described in sub-paragraph (a)(3) above; the transcript of the hearing; all evidence considered by the Hearing Panel; and any other document or item accepted into the record by the Hearing Panel. The Exchange shall be the custodian of the record. Proffered evidence that is not accepted into the record by the Hearing Panel shall be retained by the custodian of the record until the date when the Exchange's decision becomes final or, if applicable, upon the conclusion of any review by the SEC or federal courts.

(8) **Failure to Appear at a Hearing**. If a Respondent fails to appear at a hearing for which it has notice, the allegations in the notice and accompanying declaration may be deemed admitted, and the Hearing Panel may issue a suspension order without further proceedings. If the Exchange fails to appear at a hearing for which it has notice, the Hearing Panel may order that the suspension proceeding be dismissed.

(d) **Issuance of Suspension Order by Hearing Panel.**

(1) **Basis for Issuance**. The Hearing Panel shall issue a written decision stating whether a suspension order shall be imposed. The Hearing Panel shall issue the decision not later than ten days after receipt of the hearing transcript, unless otherwise extended by the Chairman of the Hearing Panel with the consent of the Parties for good cause shown. A suspension order shall be imposed if the Hearing Panel finds:

(i) by a preponderance of evidence that the alleged violation specified in the notice has occurred; and

(ii) that the violative conduct or continuation thereof is likely to result in significant market disruption or other significant harm to investors.

(2) **Content, Scope, and Form of Order**. A suspension order shall:

(i) be limited to: (1) ordering a Respondent to cease and desist from violating Rule 322, and/or (2) ordering a Respondent to cease and desist from providing access to the Exchange to a client of Respondent that is causing violations of Rule 322;

(ii) set forth the alleged violation and the significant market disruption or other significant harm to investors that is likely to result without the issuance of an order;

(iii) describe in reasonable detail the act or acts the Respondent is to take or refrain from taking and to suspend the Respondent unless and until such action is taken or refrained from; and

(iv) include the date and hour of its issuance.

(3) **Duration of Order**. A suspension order shall remain effective and enforceable unless modified, set aside, limited, or revoked pursuant to paragraph (e), below.

(4) **Service**. The Hearing Panel's decision and any suspension order shall be served by personal service or overnight commercial courier. The suspension order shall be effective upon service.

(e) **Review by Hearing Panel**. At any time after the Respondent is served with a suspension order, a Party may apply to the Hearing Panel to have the order modified, set aside, limited, or revoked. The application shall set forth with specificity the facts that support the request. The Hearing Panel shall respond to the request in writing within ten days after receipt of the request, unless otherwise extended by the Chairman of the Hearing Panel with the consent of the Parties for good cause shown. The Hearing Panel's response shall be served on the Respondent via personal service or overnight commercial courier. The filing of an application under this Rule shall not stay the effectiveness of the suspension order.

(f) **Application to SEC for Review**. Sanctions imposed pursuant to this Rule constitute final and immediately effective disciplinary sanctions imposed by the Exchange. The right to have any action under this Rule reviewed by the SEC is governed by Section 19 of the Exchange Act. The filing of an application for review shall not stay the effectiveness of a suspension order unless the SEC otherwise orders.

[Adopted: February 6, 2017 (SR-PEARL-2017-03)]

CHAPTER XI. HEARINGS, REVIEW AND ARBITRATION

The rules contained in MIAX Chapter XI, as such rules may be in effect from time to time (the "Chapter XI Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter XI, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter XI Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XI Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in the Chapter XI Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter XI Rules shall be read to refer to MIAX PEARL Rule; the defined term "Business Conduct Committee" in the Chapter XI Rules shall be read to refer to the MIAX PEARL Business Conduct Committee; and the defined term "Member" in the Chapter XI Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended April 3, 2017 (SR-PEARL-2017-11); amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER XII. ORGANIZATION AND ADMINISTRATION

Rule 1200. Divisions of the Exchange

The divisions of the Exchange shall include the Regulatory Division and such other Divisions as the Chief Executive Officer, with the approval of the Board, may establish. The Chief Executive Officer shall appoint a head of every Division and may designate departments within each Division.

[Adopted: December 13, 2016]

Rule 1201. Designees

(a) The Chief Executive Officer ("CEO") or the Chief Regulatory Officer ("CRO") of the Exchange may formally designate one or more qualified employees of MIAX PEARL to act in place of any person named in a rule as having authority to act under such rule in the event that the named person in the rule is not available to administer that rule.

(b) For purposes of a designation by the CEO, a qualified employee is: (1) any officer of MIAX PEARL that the CEO deems to possess the requisite knowledge and job qualifications to administer that rule; or (2) any employee of the Exchange that the CEO and the Board of Directors deems to possess the requisite knowledge and job qualifications to administer that rule.

(c) For purposes of a designation by the CRO, a qualified employee is: (1) any officer of the MIAX PEARL Regulatory Division that the CRO deems to possess the requisite knowledge and job qualifications to administer that rule; or (2) an employee of the MIAX PEARL Regulatory Division that the CRO and the Board of Directors deems to possess the requisite knowledge and job qualifications to administer that rule.

[Adopted: December 13, 2016]

Rule 1202. Membership Dues

(a) The dues payable by Members shall be fixed from time to time by the Board. Dues shall be payable in full on the first day of each month on a nonrefundable basis and shall be applied to the month beginning on that day. The Board may, on the request of a Member who is serving on active duty in the Armed Forces of the United States, waive dues during the period of such service.

(b) In addition to the fees and charges provided for by Rule 1202, the Board may, from time to time, fix and impose other fees, assessments or charges to be paid to the Exchange or to an organization designated by the Exchange by Members or by categories of Members with respect to applications, registrations, approvals, use of Exchange facilities, or other services or privileges granted.

[Adopted: December 13, 2016]

Rule 1203. Other Fees and Charges

(a) **Access Fees.** The access fees payable by Members shall be fixed from time to time by the Board.

(b) **Transaction Fees.** Members shall pay a fee for each transaction they execute on the Exchange, as may be determined by the Board.

(c) **Communication Fees.** The Board may, at its discretion, impose a communication fee for quotes entered on the Exchange in addition to the fee contained in Rule 1202(b).

(d) **Regulatory Fees or Charges.** In addition to the dues and charges specified in this Chapter, the Board may, from time to time, fix and impose other fees, assessments or charges to be paid to the Exchange by Members or by Classes

of Members with respect to applications, registrations, approvals, use of Exchange facilities, regulatory oversight or other services or privileges granted.

(e) **Fee Disputes**. All disputes concerning fees, dues or charges assessed by the Exchange must be submitted to the Exchange in writing and must be accompanied by supporting documentation. All disputes related to fees, dues or other charges must be submitted to the Exchange no later than sixty (60) days after the date of the monthly invoice. All Exchange invoices are due in full on a timely basis and payable in accordance with Rule 208. Any disputed amount resolved in the Member's favor will be subsequently credited to the Clearing Member's account at the Clearing Corporation.

[Adopted: December 13, 2016]

Rule 1204. Liability for Payment of Fees

(a) Any Member that does not pay any dues, fees, assessments, charges, fines or other amounts due to the Exchange within thirty (30) days after they have become payable shall be reported to the President, who may, after giving reasonable notice to the Member of such arrearages, suspend the Member's trading privileges until payment is made.

(b) A person associated with a Member who fails to pay any fine or other amounts due to the Exchange within thirty (30) days after such amount has become payable and after reasonable notice of such arrearages, may be suspended from association with a Member until payment is made.

[Adopted: December 13, 2016]

Rule 1205. Exchange's Costs of Defending Legal Proceedings

Any Member or person associated with a Member who fails to prevail in a lawsuit or other legal proceeding instituted by such person against the Exchange or any of its Directors, officers, committee members, limited liability members, employees or agents, and related to the business of the Exchange, shall pay to the Exchange all reasonable expenses, including attorneys' fees, incurred by the Exchange in the defense of such proceeding, but only in the event that such expenses exceed fifty thousand dollars ($50,000). This provision shall not apply to disciplinary actions by the Exchange, to administrative appeals of Exchange actions or in any specific instance where the Board has granted a waiver of this provision.

[Adopted: December 13, 2016]

Rule 1206. Committees of the Exchange

(a) **Establishment of Committees**. The Chief Executive Officer, with the approval of the Board, shall appoint any committee members that are not Directors to committees established by the Board in the By-Laws, or established by the Chief Executive Officer pursuant to authority delegated to him by the Board.

(b) **Removal of Committee Members**. The Chief Executive Officer may, with the approval of the Board, remove any committee member that is not a Director for refusal, neglect, or inability to discharge such committee member's duties.

(c) **Committee Procedures**. Except as otherwise provided in the By-Laws, the Rules or resolution of the Board, each committee shall determine its own time and manner of conducting its meetings and the vote of a majority of the members of a committee present at a meeting at which time a quorum is present shall be the act of the committee. Committees may act informally by written consent of all of the members of the committee.

(d) **General Duties and Powers of Committees.** Each committee shall administer the provisions of the By-Laws and the Rules pertaining to matters within its jurisdiction. Each committee shall have such other powers and duties as may be delegated to it by the Board. Each committee is subject to the control and supervision of the Board.

[Adopted: December 13, 2016]

Rule 1207. Sales Value Fee

(a) The Sales Value Fee is assessed by the Exchange to each Member for sales on the Exchange with respect to which the Exchange is obligated to pay a fee to the Commission pursuant to Section 31 of the Exchange Act. To the extent there may be any excess monies collected under this Rule, the Exchange may retain those monies to help fund general operating expenses. The sales transactions to which the fee applies are sales of options (other than options on a security index) and the sales of securities resulting from the exercise of physical-delivery options. The fee is collected indirectly from Members through their clearing firms by The Options Clearing Corporation on behalf of MIAX PEARL with respect to option sales and options exercises.

(b) The Sales Value Fee is equal to the Section 31 fee rate multiplied by the Member's aggregate dollar amount of covered sales resulting from options transactions occurring on the Exchange during any computational period.

[Adopted: December 13, 2016]

CHAPTER XIII. DOING BUSINESS WITH THE PUBLIC

The rules contained in MIAX Chapter XIII, as such rules may be in effect from time to time (the "Chapter XIII Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter XIII, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter XIII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XIII Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in Chapter XIII Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter XIII Rules shall be read to refer to the MIAX PEARL Rule; the defined term "Options Principal" in the Chapter XIII Rules shall be read to refer to the MIAX PEARL Principal; and the defined term "Member" in the Chapter XIII Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended June 14, 2017 (SR-MIAX-2017-21); amended November 15, 2017 (SR-MIAX-2017-43); amended February 2, 2018 (SR-MIAX-2018-01); amended September 27, 2018 (SR-MIAX-2018-26); amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER XIV. ORDER PROTECTION, LOCKED AND CROSSED MARKETS

The rules contained in MIAX Chapter XIV, as such rules may be in effect from time to time (the "Chapter XIV Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter XIV, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter XIV Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XIV Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in Chapter XIV Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter XIV Rules shall be read to refer to the MIAX PEARL Rule; the defined term "bid" in the Chapter XIV Rules shall be read to refer to the MIAX PEARL bid; and the defined term "Member" in the Chapter XIV Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended June 14, 2017 (SR-MIAX-2017-21); amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER XV. MARGINS

The rules contained in MIAX Chapter XV, as such rules may be in effect from time to time (the "Chapter XV Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter XV, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter XV Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XV Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in Chapter XV Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter XV Rules shall be read to refer to the MIAX PEARL Rule; and the defined term "Member" in the Chapter XV Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER XVI. NET CAPITAL REQUIREMENTS

The rules contained in MIAX Chapter XVI, as such rules may be in effect from time to time (the "Chapter XVI Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter XVI, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter XVI Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XVI Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in Chapter XVI Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter XVI Rules shall be read to refer to the MIAX PEARL Rule; and the defined term "Member" in the Chapter XVI Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: December 13, 2016; amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER XVII. CONSOLIDATED AUDIT TRAIL COMPLIANCE RULE

The rules contained in MIAX Chapter XVII, as such rules may be in effect from time to time (the "Chapter XVII Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter XVII, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter XVII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XVII Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in Chapter XVII Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter XVII Rules shall be read to refer to the MIAX PEARL Rule; and the defined term "Member" in the Chapter XVII Rules shall be read to refer to the MIAX PEARL Member.

[Adopted: March 15, 2017 (SR-PEARL-2017-04); amended August 18, 2017 (SR-MIAX-2017-35); amended May 24, 2019 (SR-PEARL-2019-16)]

CHAPTER XVIII. INDEX OPTIONS

The rules contained in MIAX Chapter XVIII, as such rules may be in effect from time to time (the "Chapter XVIII Rules"), are hereby incorporated by reference into this MIAX PEARL Chapter XVIII, and are thus MIAX PEARL Rules and thereby applicable to MIAX PEARL Members. MIAX PEARL Members shall comply with the Chapter XVIII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XVIII Rules shall be read to refer to the MIAX PEARL related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term "Exchange" in Chapter XVIII Rules shall be read to refer to MIAX PEARL; the defined term "Rule" in the Chapter XVIII Rules shall be read to refer to the MIAX PEARL Rule; and the defined term "Member" in the Chapter XVIII Rules shall be read to refer to the MIAX PEARL Member. Any reference to MIAX Rule 506(d) will be construed to reference corresponding MIAX PEARL Rule 506(e).

[Adopted: April 12, 2018 (SR-PEARL-2018-02); amended August 30, 2018 (SR-MIAX-2018-24); amended October 12, 2018 (SR-MIAX-2018-14); amended November 9, 2018 (SR-MIAX-2018-32); amended May 24, 2019 (SR-PEARL-2019-16)]

Exhibit C

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:

A. MIAMI INTERNATIONAL HOLDINGS, INC.

1. *Name*: Miami International Holdings, Inc.
   Address: 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540

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), on November 14, 2007.

4. *Brief description of nature and extent of affiliation*: MIAX PEARL, LLC is a wholly-owned subsidiary of Miami International Holdings, Inc. ("MIH").

5. *Brief description of business or functions*: Miami International Holdings, Inc. ("Miami Holdings") is a holding company which holds 100% of the equity of Miami International Securities Exchange, LLC, MIAX PEARL, LLC, Miami International Technologies, LLC, MIAX Global, LLC, MIAX Emerald, LLC, Miami International Futures Exchange, LLC, and MIAX Products, LLC. Miami International Holdings, Inc. is the entity through which the ultimate owners of the applicant indirectly hold their ownership interest in the applicant and its affiliates.

6. *A copy of the constitution*: Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Amended and Restated Certificate of Incorporation dated October 16, 2015 is attached.**

8. *A copy of existing by-laws or corresponding rules or instruments*: **The Amended and Restated By-Laws dated June 27, 2015 are attached.**

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

Officers of Miami International Holdings, Inc.

The following persons are the officers of Miami International Holdings, Inc.:

Name	Title
Thomas P. Gallagher	Chairman and Chief Executive Officer
Douglas M. Schafer, Jr.	Chief Information Officer and Executive Vice President
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary
Paul Warner	Executive Vice President and Chief Financial Officer
Edward Deitzel	Executive Vice President and Chief Regulatory Officer
Randy Foster	Senior Vice President – Business Systems Development
Harish Jayabalan	Senior Vice President – Chief Risk Officer and Chief Information Security Officer
Matthew Rotella	Senior Vice President – Chief Technology Officer
Joseph W. Ferraro III	Senior Vice President – Deputy General Counsel
Deborah Carroll	Senior Vice President – Associate General Counsel
Amy Neiley	Senior Vice President – Trading Operations and Listings
Roli Bhotika	Vice President – Head of Business Development
Rodney Hester	Vice President – Systems Infrastructure
Shawn Hughes	Vice President – Project Management
James O'Neil	Vice President and Director of Physical Security and Safety
Vinay Rao	Vice President – Trading Systems Development

Name	Title
Siddharth Sahoo	Vice President – Trading Systems Development
Tia Toms	Vice President – Administration
Kelly Fitzgerald	Assistant Vice President – Controller
Christopher Solgan	Assistant Vice President – Senior Counsel
Gregory Ziegler	Assistant Vice President – Senior Associate Counsel

The officers of Miami International Holdings, Inc. serve until their successors are appointed in accordance with the By-Laws of Miami International Holdings, Inc. Officers of Miami International Holdings, Inc. serve at the direction of the Board of Directors.

Directors of Miami International Holdings, Inc.

The following persons are the directors of Miami International Holdings, Inc.:

Name
Thomas P. Gallagher (Chairman)
Talal Jassim Al-Bahar
Abdulwahab Ahmad Al-Nakib
Sayer B. Al-Sayer
Michael P. Ameen
Albert M. Barro, Jr.
John Beckelman
Barry J. Belmont
Ricardo Blach
Christopher Brady
Khaled Magdy El-Marsafy
William W. Hopkins
Thomas J. Kelly, Jr.
Paul Kotos
Jack G. Mondel
William J. O'Brien III
Robert D. Prunetti
Mark F. Raymond
Douglas M. Schafer, Jr.
Paul V. Stahlin
Byrum W. Teekell
Christopher L. Whittington
Jassem Hassan Zainal

Directors of Miami International Holdings, Inc. serve one year terms.

Audit Committee of Miami International Holdings, Inc.

The following persons are members of the Audit Committee of Miami International Holdings, Inc.:

Name
Paul V. Stahlin (Chairman)
Michael P. Ameen
Khaled Magdy El-Marsafy

Compensation Committee of Miami International Holdings, Inc.

The following persons are members of the Compensation Committee of Miami International Holdings, Inc.:

Name
Talal Jassim Al-Bahar (Chairman)
Christopher D. Brady
Thomas J. Kelly
Mark F. Raymond
Byrum W. Teekell

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*: Not applicable.

B. MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

1. *Name*: Miami International Securities Exchange, LLC
Address: 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540

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

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), on September 10, 2007.

4. *Brief description of nature and extent of affiliation:* Miami International Securities Exchange, LLC is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions*: Miami International Securities Exchange, LLC ("MIAX") is registered as a National Securities Exchange under Section 6 of the Securities Exchange Act of 1934, as amended. MIAX operates a fully electronic options trading platform.

6. *A copy of the constitution*: Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Amended and Restated Certificate of Formation dated June 17, 2011 is attached.**

8. *A copy of existing by-laws or corresponding rules or instruments*: **The Second Amended and Restated Limited Liability Company Agreement dated December 1, 2012, and Amended and Restated By-Laws dated May 20, 2016 are attached.**

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

Officers of Miami International Securities Exchange, LLC

The following persons are the officers of Miami International Securities Exchange, LLC:

Name	Title
Thomas P. Gallagher	Chairman and Chief Executive Officer
Douglas M. Schafer, Jr.	Chief Information Officer and Executive Vice President
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary
Paul Warner	Executive Vice President and Chief Financial Officer
Edward Deitzel	Executive Vice President, Chief Regulatory Officer and Chief Compliance Officer
Shelly Brown	Executive Vice President – Strategic Planning and Business Development
John Smollen	Executive Vice President – Head of Exchange Traded Products and Strategic Relations
Randy Foster	Senior Vice President – Business Systems Development
Harish Jayabalan	Senior Vice President – Chief Risk Officer and Chief Information Security Officer
Matthew Rotella	Senior Vice President – Chief Technology Officer
Joseph W. Ferraro III	Senior Vice President – Deputy General Counsel
Deborah Carroll	Senior Vice President, Associate General Counsel and Assistant Corporate Secretary
Richard Ross	Senior Vice President of Exchange Traded Products
Joseph S. Bracco	Senior Vice President – Head of Sales
Amy Neiley	Senior Vice President – Trading Operations and Listings
Roli Bhotika	Vice President – Head of Business Development
Lawrence O'Leary	Vice President – Market Surveillance
Laurence Gardner	Vice President – Regulatory Operations
Rodney Hester	Vice President – Systems Infrastructure
Shawn Hughes	Vice President – Project Management

Name	Title
James O'Neil	Vice President and Director of Physical Security and Safety
Vinay Rao	Vice President – Trading Systems Development
Siddharth Sahoo	Vice President – Trading Systems Development
Tia Toms	Vice President – Administration
Kelly Fitzgerald	Assistant Vice President – Controller
Christopher Solgan	Assistant Vice President – Senior Counsel
Gregory Ziegler	Assistant Vice President – Senior Associate Counsel

The officers of Miami International Securities Exchange, LLC serve until their successors are appointed in accordance with the By-Laws of Miami International Securities Exchange, LLC. Officers of Miami International Securities Exchange, LLC will serve at the direction of the Board of Directors.

Directors of Miami International Securities Exchange, LLC

The following persons are the directors and Board observers of Miami International Securities Exchange, LLC:

Directors
Thomas P. Gallagher
Talal Jassim Al-Bahar
Michael P. Ameen
Lindsay L. Burbage
Robert Castrignano
Marianne Deane
John DiBacco, Jr.
Meaghan Dugan
Kurt M. Eckert
Leslie Florio
Lawrence E. Jaffe
Paul Jiganti
John A. Kinahan
John E. McCormac
Miguel Moratiel
William J. O'Brien IV
Robert D. Prunetti
Joseph Sellitto
Cynthia Schwarzkopf
J. Gray Teekell

Observers
Guy Dowman
Lawrence Tanzman

Committees of Miami International Securities Exchange, LLC

The standing committees of the Board and the persons appointed to sit on the standing committees are as follows:

Audit Committee
Robert D. Prunetti (Chair)
Michael P. Ameen
John E. McCormac

Compensation Committee
J. Gray Teekell (Chair)
Robert D. Prunetti
Cynthia Schwarzkopf

Regulatory Oversight Committee
Lindsay L. Burbage (Chair)
Leslie Florio
Lawrence E. Jaffe

Appeals Committee
Lawrence Jaffe (Chair)
Robert Castrignano
Kurt M. Eckert

Technology Committee
Leslie Florio (Chair)
Robert Castrignano
Marianne Deane
Meaghan Dugan
Kurt M. Eckert
John A. Kinahan
John E. McCormac
William J. O'Brien IV
J. Gray Teekell

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*: Not applicable.

C. MIAMI INTERNATIONAL TECHNOLOGIES, LLC

1. *Name*: Miami International Technologies, LLC
Address: 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540

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

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), on May 12, 2010.

4. *Brief description of nature and extent of affiliation*: Miami International Technologies, LLC ("MIAX Technologies") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions*: MIAX Technologies engages in the sale and licensing of trading and information technology to unrelated third parties.

6. *A copy of the constitution*: Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Amended and Restated Certificate of Formation dated June 29, 2011 is attached.**

8. *A copy of existing by-laws or corresponding rules or instruments*: **The First Amended and Restated Limited Liability Company Agreement dated May 20, 2011 is attached.**

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

Officers of Miami International Technologies, LLC

The following persons are the officers of Miami International Technologies, LLC:

Name	Title
Thomas P. Gallagher	Chairman and Chief Executive Officer
Douglas M. Schafer, Jr.	President and Chief Information Officer
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary
Paul Warner	Executive Vice President and Chief Financial Officer
Matthew Rotella	Senior Vice President – Chief Technology Officer
Randy Foster	Senior Vice President – Business Systems Development
Deborah Carroll	Senior Vice President – Associate General Counsel

Name	Title
Rodney Hester	Vice President – Systems Infrastructure
Harish Jayabalan	Vice President – Technical Support and Product Specialist
James O'Neil	Vice President and Director of Physical Security and Safety
Tia Toms	Vice President – Administration
Kelly Fitzgerald	Assistant Vice President – Controller

Directors of Miami International Technologies, LLC

The following persons are the directors of Miami International Technologies, LLC:

Name
Thomas P. Gallagher

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*: Not applicable.

D. MIAX GLOBAL, LLC

1. *Name*: MIAX Global, LLC
Address: 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540

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

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), on June 30, 2015.

4. *Brief description of nature and extent of affiliation:* MIAX Global, LLC ("MIAX Global") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions*: MIAX Global focuses on the company's trading, technology and other projects primarily based outside of North America, initially focusing on Europe and Latin America.

6. *A copy of the constitution:* Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Certificate of Formation dated June 30, 2015 is attached.**

8. *A copy of existing by-laws or corresponding rules or instruments:* **The Limited Liability Company Agreement dated June 30, 2015 is attached.**

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

Officers of MIAX Global, LLC

The following persons are the officers of MIAX Global, LLC:

Name	Title
Thomas P. Gallagher	Chairman and Chief Executive Officer
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary
Douglas M. Schafer, Jr.	Chief Information Officer and Executive Vice President
Paul Warner	Executive Vice President and Chief Financial Officer

Directors of MIAX Global, LLC

The following persons are the directors of MIAX Global, LLC:

Name
Thomas P. Gallagher

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:* Not applicable.

E. MIAMI INTERNATIONAL FUTURES EXCHANGE, LLC

1. *Name*: Miami International Futures Exchange, LLC
Address: 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540

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

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), on November 30, 2007.

4. *Brief description of nature and extent of affiliation*: Miami International Futures Exchange, LLC ("MIAX Futures") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions*: MIAX Futures is not yet active. Miami International Holdings, Inc. may develop MIAX Futures as a futures exchange under the regulation of the CFTC. If MIAX Futures becomes operational, it will perform functions performed by a futures exchange.

6. *A copy of the constitution*: Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Amended and Restated Certificate of Formation dated June 17, 2011 is attached.**

8. *A copy of existing by-laws or corresponding rules or instruments*: **The First Amended and Restated Limited Liability Company Agreement dated May 20, 2011 is attached.**

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

Officers of Miami International Futures Exchange, LLC

The following persons are the officers of Miami International Futures Exchange, LLC:

Name	Title
Thomas P. Gallagher	Chairman and Chief Executive Officer
Douglas M. Schafer, Jr.	Chief Information Officer and Executive Vice President
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary

Directors of Miami International Futures Exchange, LLC

The following persons are the directors of Miami International Futures Exchange, LLC:

Name
Thomas P. Gallagher

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*: Not applicable.

F. MIAX EMERALD, LLC

1. *Name*: MIAX Emerald, LLC
Address: 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540

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

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), on January 30, 2018.

4. *Brief description of nature and extent of affiliation*: MIAX Emerald, LLC ("MIAX Emerald") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions*: MIAX Emerald is registered as a National Securities Exchange under Section 6 of the Securities Exchange Act of 1934, as amended. MIAX Emerald operates a fully electronic options trading platform.

6. *A copy of the constitution*: Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Certificate of Formation dated January 30, 2018 is attached.**

8. *A copy of existing by-laws or corresponding rules or instruments*: **The Amended and Restated Limited Liability Company Agreement dated December 21, 2018 and By-Laws dated December 21, 2018 are attached.**

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

Officers of MIAX Emerald, LLC

The following persons are the officers of MIAX Emerald, LLC:

Name	Title
Thomas P. Gallagher	Chairman and Chief Executive Officer
Douglas M. Schafer, Jr.	Chief Information Officer and Executive Vice President
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary
Paul Warner	Executive Vice President and Chief Financial Officer
Edward Deitzel	Executive Vice President, Chief Regulatory Officer and Chief Compliance Officer
Shelly Brown	Executive Vice President – Strategic Planning and Business Development
John Smollen	Executive Vice President – Head of Exchange Traded Products and Strategic Relations
Randy Foster	Senior Vice President – Business Systems Development
Harish Jayabalan	Senior Vice President – Chief Risk Officer & Chief Information Security Officer
Matthew Rotella	Senior Vice President – Chief Technology Officer
Joseph W. Ferraro III	Senior Vice President – Deputy General Counsel
Deborah Carroll	Senior Vice President, Associate General Counsel and Assistant Corporate Secretary
Richard Ross	Senior Vice President of Exchange Traded Products
Joseph S. Bracco	Senior Vice President – Head of Sales
Amy Neiley	Senior Vice President – Trading Operations and Listings
Roli Bhotika	Vice President – Head of Business Development
Rodney Hester	Vice President – Systems Infrastructure
Shawn Hughes	Vice President – Project Management
Lawrence O'Leary	Vice President – Market Surveillance
Laurence Gardner	Vice President – Regulatory Operations
James O'Neil	Vice President and Director of Physical Security and Safety

Name	Title
Vinay Rao	Vice President – Trading Systems Development
Siddharth Sahoo	Vice President – Trading Systems Development
Tia Toms	Vice President – Administration
Kelly Fitzgerald	Assistant Vice President – Controller
Christopher Solgan	Assistant Vice President – Senior Counsel
Gregory Ziegler	Assistant Vice President – Senior Associate Counsel

The officers of MIAX Emerald, LLC serve until their successors are appointed in accordance with the By-Laws of MIAX Emerald, LLC. Officers of MIAX Emerald, LLC will serve at the direction of the Board of Directors.

Directors of MIAX Emerald, LLC

The following persons are the directors of MIAX Emerald, LLC:

Name
Thomas P. Gallagher
Lindsay L. Burbage
Marianne Deane
Kurt M. Eckert
Leslie Florio
Kimberly M. Guadagno
Paul Jiganti
Joseph M. Kyrillos Jr.
John E. McCormac
Robert D. Prunetti

Committees of MIAX Emerald, LLC

The standing committees of the Board and the persons appointed to sit on the standing committees are as follows:

Audit Committee
Robert D. Prunetti (Chair)
Joseph M. Kyrillos Jr.
John E. McCormac

Compensation Committee
Robert D. Prunetti (Chair)
Marianne Deane
Joseph M. Kyrillos Jr.

Regulatory Oversight Committee
Lindsay L. Burbage (Chair)
Leslie Florio
Kimberly M. Guadagno

Appeals Committee
Marianne Deane (Chair)
Kurt M. Eckert
Paul Jiganti

Technology Committee
Leslie Florio (Chair)
Marianne Deane
John E. McCormac

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*: Not applicable.

G. MIAX PRODUCTS, LLC

1. *Name*: MIAX Products, LLC
Address: 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540

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

3. *Name of state, statute under which organized and date of incorporation*: Illinois, Illinois Limited Liability Company Act, 805 ILCS 180/, on January 25, 2019.

4. *Brief description of nature and extent of affiliation*: MIAX Products, LLC ("MIAX Products") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions*: Development of financial products.

6. *A copy of the constitution*: Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Articles of Organization dated January 25, 2019 are attached.**

8. *A copy of existing by-laws or corresponding rules or instruments*: **The Limited Liability Company Agreement dated January 25, 2019 is attached.**

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

Officers of MIAX Products, LLC

The following persons are the officers of MIAX Products, LLC:

Name	**Title**
Thomas P. Gallagher	Chairman and Chief Executive Officer
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary
Douglas M. Schafer, Jr.	Chief Information Officer and Executive Vice President
Paul Warner	Executive Vice President and Chief Financial Officer

Directors of MIAX Products, LLC

The following persons are the directors of MIAX Products, LLC:

Name
Thomas P. Gallagher

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*: Not applicable.

A

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF MIAMI INTERNATIONAL HOLDINGS, INC.

MIAMI INTERNATIONAL HOLDINGS, INC., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), in accordance with the provisions of Section 245 of the General Corporation Law of the State of Delaware, hereby certifies as follows:

1. The Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on November 14, 2007.

2. An Amended and Restated Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on January 22, 2008.

3. An Amended and Restated Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on May 15, 2008.

4. A Certificate of Designation for the Series B Preferred Stock of the Corporation was filed with the Secretary of State of the State of Delaware on May 30, 2008.

5. A Certificate of Designation for the Series A Preferred Stock of the Corporation was filed with the Secretary of State of the State of Delaware on June 4, 2008.

6. A Certificate of Increase of Shares Designated as Series B Preferred Stock of the Corporation was filed with the Secretary of State of the State of Delaware on November 1, 2010.

7. A Certificate of Elimination for the Series A Preferred Stock of the Corporation was filed with the Secretary of State of the State of Delaware on November 1, 2010.

8. A Restated Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on November 9, 2010.

9. An Amended and Restated Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on August 31, 2012.

10. This Amended and Restated Certificate of Incorporation of the Corporation amends and restates the Restated Certificate of Incorporation of the Corporation as set forth in Exhibit A attached hereto. This Amended and Restated Certificate of Incorporation of the Corporation was duly adopted in accordance with Section 242 and 245 of the General Corporation Law of the State of Delaware.

11. The text of this Amended and Restated Certificate of Incorporation of the Corporation is set forth in Exhibit A attached hereto and made a part hereof.

IN WITNESS WHEREOF, Miami International Holdings, Inc. has caused this Amended and Restated Certificate of Incorporation to be executed by its duly authorized officer on this 15th day of October, 2015.

MIAMI INTERNATIONAL HOLDINGS, INC.

By: Barbara J. Comly

Barbara J. Comly
EVP, General Counsel and Corporate Secretary

State of Delaware
Secretary of State
Division of Corporations
Delivered 10:00 AM 10/16/2015
FILED 10:00 AM 10/16/2015
SR 20150535314 - File Number 4457259

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF MIAMI INTERNATIONAL HOLDINGS, INC.

FIRST: The name of the Corporation is Miami International Holdings, Inc. (hereinafter the "Corporation").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle. The name of its registered agent at that address is The Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware as set forth in Title 8 of the Delaware Code (the "GCL").

FOURTH: A. The total number of shares of stock which the Corporation shall have authority to issue is 625,000,000 shares which are to be divided as follows:

(i) 400,000,000 shares of voting common stock, par value $.001 per share designated as "Common Stock";

(ii) 200,000,000 shares of nonvoting common stock, par value $.001 per share designated as "Nonvoting Common Stock"; and

(iii) 25,000,000 shares of preferred stock, par value $.001 per share designated as "Preferred Stock".

Except as set forth in this Article Fourth, the Common Stock and the Nonvoting Common Stock (together herein, the "Common Shares") shall have the same rights and privileges and shall rank equally, share ratably and be identical in all respects as to all corporate matters.

(a) **Voting**. Except as may be provided in this Amended and Restated Certificate of Incorporation or as required by law, the Common Stock shall have voting rights in the election of directors and on all other matters presented to stockholders, with each holder of Common Stock being entitled to one vote for each share of Common Stock held of record by such holder on such matters. The Nonvoting Common Stock shall have no voting rights other than such rights as may be required by the first sentence of Section 242(b)(2) of the GCL or any similar provision hereafter enacted; provided, that an amendment of this Amended and Restated Certificate of Incorporation to increase or decrease the number of authorized shares of Nonvoting Common Stock (but not below the number of shares thereof then outstanding) may be adopted by resolution adopted by the Board of Directors of the Corporation and approved by the affirmative vote of the holders of a majority of the voting power of all outstanding shares of Common Stock of the Corporation and all other outstanding shares of stock of the Corporation entitled to vote thereon irrespective of the provisions of Section 242(b)(2) of the GCL or any similar provision hereafter enacted, with such outstanding shares of Common Stock and other

stock considered for this purpose as a single class, and no vote of the holders of any shares of Nonvoting Common Stock, voting separately as a class, shall be required therefor.

(b) **Dividends**. Subject to the rights of the holders of any series of Preferred Stock, holders of Common Stock and holders of Nonvoting Common Stock shall be entitled to receive such dividends and distributions (whether payable in cash or otherwise) as may be declared on the Common Shares by the Board of Directors of the Corporation from time to time out of assets or funds of the Corporation legally available therefore; provided, that the Board of Directors of the Corporation shall declare no dividend, and no dividend shall be paid, with respect to any outstanding share of Common Stock or Nonvoting Common Stock, whether in cash or otherwise (including any dividend in shares of Common Stock on or with respect to shares of Common Stock or any dividend in shares of Nonvoting Common Stock on or with respect to shares of Nonvoting Common Stock (collectively, "Stock Dividends")), unless, simultaneously, the same dividend is declared or paid with respect to each share of Common Stock and Nonvoting Common Stock. The declaration of Stock Dividends shall be subject to the provisions set forth in Article Ninth below and if the Corporation declares any Stock Dividends and such declaration would violate the provisions of Article Ninth with respect to any stockholder, then the Corporation shall only issue to such stockholder a certificate or certificates for the maximum amount of Stock Dividends that may be issued that would not violate the provisions of Article Ninth. The Corporation shall issue any Stock Dividends in full to any stockholder where such declaration would not violate the provisions of Article Ninth. If a Stock Dividend is declared or paid with respect to one class, then a Stock Dividend shall likewise be declared or paid with respect to the other class and shall consist of shares of such other class in a number that bears the same relationship to the total number of shares of such other class, issued and outstanding immediately prior to the payment of such dividend, as the number of shares comprising the Stock Dividend with respect to the first-referenced class bears to the total number of shares of such first-referenced class, issued and outstanding immediately prior to the payment of such dividend. Stock Dividends with respect to Common Stock may be paid only with shares of Common Stock. Stock Dividends with respect to Nonvoting Common Stock may be paid only with shares of Nonvoting Common Stock. Notwithstanding the foregoing, in the case of any dividend in the form of capital stock of a subsidiary of the Corporation, the capital stock of the subsidiary distributed to holders of Common Stock shall be identical to the capital stock of the subsidiary distributed to holders of Nonvoting Common Stock, except that the capital stock distributed to holders of Common Stock may have full or any other voting rights and the capital stock distributed to holders of Nonvoting Common Stock shall be non-voting to the same extent as the Nonvoting Common Stock is non-voting.

(c) **Subdivisions, Combinations and Mergers**. If the Corporation shall in any manner split, subdivide or combine the outstanding shares of Common Stock or the outstanding shares of Nonvoting Common Stock, the outstanding shares of the other such class of the Common Shares shall likewise be split, subdivided or combined in the same manner proportionately and on the same basis per share. In the event of any merger, statutory share exchange, consolidation or similar form of corporate transaction involving the Corporation (whether or not the Corporation is the surviving entity), the holders of Common Stock and the holders of Nonvoting Common Stock shall be entitled to receive the same per share consideration, if any, except that any securities received by holders of Common Stock in consideration of such stock may have full or any other voting rights and any securities received

by holders of Nonvoting Common Stock in consideration of such stock shall be non-voting to the same extent as the Nonvoting Common Stock is non-voting.

(d) **Rights on Liquidation**. Subject to the rights of the holders of any series of Preferred Stock, in the event of any liquidation, dissolution or winding-up of the Corporation (whether voluntary or involuntary), the assets of the Corporation available for distribution to stockholders shall be distributed in equal amounts per share to the holders of Common Stock and the holders of Nonvoting Common Stock, as if such classes constituted a single class. For purposes of this subsection (d), a merger, statutory share exchange, consolidation or similar corporate transaction involving the Corporation (whether or not the Corporation is the surviving entity), or the sale, transfer or lease by the Corporation of all or substantially all its assets, shall not constitute or be deemed a liquidation, dissolution or winding-up of the Corporation.

(e) **Conversion of Nonvoting Common Stock**.

(i) **Optional Conversion.** Subject to the provisions set forth in Article Ninth below, each one share of the Nonvoting Common Stock will be convertible at the option of the holder thereof into one fully paid and non-assessable share of Common Stock, subject to adjustment as provided in this Article Fourth. If any stockholder purports to convert any shares of Nonvoting Common Stock that would violate the provisions of Article Ninth, then the Corporation shall only issue to such stockholder a certificate or certificates for the maximum number of shares of Common Stock that may be issued that would not violate the provisions of Article Ninth.

(ii) **Mechanics of Optional Conversion**. The holder of any certificate for Nonvoting Common Stock shall be entitled to request conversion of all or part of its Nonvoting Common Stock at any time by delivering a written notice to the attention of the Secretary or Treasurer of the Corporation at the Corporation's principal place of business of its desire to convert its Nonvoting Common Stock and receive a replacement certificate or certificates therefor, specifying the number of shares of Nonvoting Common Stock to be so converted and the holder's calculation of the Nonvoting Conversion Rate. In the event of any disagreement between the Corporation and the holder as to the correct Nonvoting Conversion Rate, the Nonvoting Conversion Rate will be finally determined by an investment banking or brokerage firm with no material prior or current relationship with the Corporation or any of its subsidiaries selected by the Board in good faith, the fees and expenses of which will be paid by the Corporation. The Corporation will, promptly upon receipt of all certificates representing Nonvoting Common Stock of such holder that are to be converted, issue a certificate or certificates registering the appropriate number of shares of Common Stock to such holder. Upon optional conversion as set forth in Subsection (e)(i), the shares of Nonvoting Common Stock so converted shall be eliminated, and thereafter such shares of Nonvoting Common Stock shall become and be known as shares of "Common Stock" without further action on the part of the holder thereof. "Nonvoting Conversion Rate" means the number of shares of Common Stock into which each share of Nonvoting Common Stock may be converted.

(iii) **Reservation of Stock Issuable Upon Conversion**. The Corporation will at all times reserve and keep available out of its authorized but unissued shares of

Common Stock solely for the purpose of effecting the conversion of the shares of the Nonvoting Common Stock, such number of its shares of Common Stock as will from time to time be sufficient to effect the conversion of all then-outstanding shares of the Nonvoting Common Stock; and if at any time the number of authorized but unissued shares of Common Stock will not be sufficient to effect the conversion of all then-outstanding shares of the Nonvoting Common Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as will be sufficient for such purpose.

B. The Board of Directors of the Corporation is authorized, subject to limitations prescribed by law and the provisions of this Article Fourth, to provide for the issuance from time to time in one or more series of any number of the shares of Preferred Stock, and, by filing a certificate pursuant to the GCL, to establish the number of shares to be included in each such series, and to fix the designation, relative rights, preferences, qualifications and limitations of the shares of each such series.

The authority of the Board of Directors with respect to each such series shall include, but not be limited to, determination of the following:

(a) The number of shares constituting that series and distinctive designation of that series;

(b) The dividend rate on the shares of that series, whether dividends shall be cumulative, and, if so, from which date or dates, and whether they shall be payable in preference to, or in another relation to, the dividends payable on any other class or classes or series of stock;

(c) Whether that series shall have voting rights, in addition to the voting rights provided by law, and, if so, the terms of such voting rights;

(d) Whether that series shall have conversion privileges, and, if so, the terms and conditions of such conversion, including provision for adjustment of the conversion rate in such events as the Board of Directors shall determine;

(e) Whether or not the shares of that series shall be redeemable, and, if so, the terms and conditions of such redemption, including the manner of selecting shares for redemption if less than all shares are to be redeemed, the date or dates upon or after which they shall be redeemable, and the amount per share payable in case of redemption, which amount may vary under different conditions and at different redemption dates;

(f) Whether that series shall be entitled to the benefit of a sinking fund to be applied to the purchase or redemption of shares of that series, and, if so, the terms and amounts of such sinking fund;

(g) The rights of the shares of that series in the event of a voluntary or involuntary liquidation, dissolution or winding up of the Corporation and whether such rights

shall be in preference to, or in another relation to, the comparable rights of any other class or classes or series of stock; and

(h) Any other relative rights, preferences and limitations of that series.

Dividends on outstanding shares of Preferred Stock shall be paid or declared and set apart for payment before any dividends shall be paid or declared and set apart for payment on the shares of Common Stock or Nonvoting Common Stock with respect to the same dividend period.

If upon any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the assets available for distribution to holders of shares of Preferred Stock of all series shall be insufficient to pay such holders the full preferential amount to which they are entitled, then such assets shall be distributed ratably among the shares of all series of Preferred Stock in accordance with the respective preferential amounts (including unpaid cumulative dividends, if any) payable with respect thereto.

C. The first series of Preferred Stock designated as "Series A Preferred Stock" was eliminated by the filing of a Certificate of Elimination with respect to the Series A Preferred Stock with the Secretary of State of the State of Delaware on November 1, 2010.

D. The second series of Preferred Stock was designated as "Series B Preferred Stock" by the filing of a Certificate of Designation with respect to the Series B Preferred Stock with the Secretary of State of the State of Delaware on May 30, 2008. The number of shares designated was increased by the filing of a Certificate of Increase with respect to the Series B Preferred Stock with the Secretary of State of the State of Delaware on November 1, 2010. The designation, number of shares designated and the powers, preferences and relative participating, optional and other special rights and the qualifications, limitations and restrictions thereof are as follows:

SERIES B PREFERRED STOCK

1. **Certain Defined Terms, etc.** In addition to the terms defined elsewhere herein, certain capitalized terms used in this Article Fourth Section D have the meanings given to them in Article Fourth, Section D, Section 10. References in this Article Fourth Section D to Sections are, unless otherwise stated, references to Sections herein.

2. **Designation**. Of the 25,000,000 shares of Preferred Stock, par value $.001 per share, that the Corporation is authorized to issue, there are hereby designated Ten Million (10,000,000) as "Series B Preferred Stock" having the powers, preferences and relative participating, optional and other special rights and the qualifications, limitations and restrictions set forth in this Article Fourth Section D (the "Series B Preferred").

3. **Dividends and Distributions**. The Series B Preferred shall be entitled to receive dividends and distributions, at the same time and in the same manner as the Common Stock, and in an amount per share equal to the amount per share that the shares of Common Stock into which such Series B Preferred are convertible would have been

entitled to receive if such Series B Preferred had been so converted into Common Stock as of the record date established for determining holders entitled to dividends, or if no such record date is established, as of the time of declaration of any such dividend or distribution.

4. **Voting Rights**. (a) The Series B Preferred will have the right to vote or consent in writing as set forth in this Section 4.

(b) As long as any shares of Series B Preferred are outstanding, the affirmative vote or consent of the holders of two-thirds of the then-outstanding shares of Series B Preferred, voting as a separate class, will be required in order for the Corporation to:

(i) amend, alter or repeal, whether by merger, consolidation or otherwise, the terms of this Article Fourth Section D or any other provision of the Charter or Bylaws of the Corporation (the "Bylaws"), in any way that adversely affects any of the powers, designations, preferences and relative, participating, optional and other special rights of the Series B Preferred, and the qualifications, limitations or restrictions thereof;

(ii) subdivide or otherwise change shares of Series B Preferred into a different number of shares whether in a merger, consolidation, combination, recapitalization, reorganization or otherwise (whether or not any provision of Section 6 is applicable to such transaction); or

(iii) issue any shares of Series B Preferred other than in accordance with this Article Fourth Section D.

(c) The Series B Preferred shall have no right to vote or consent on any matters submitted to a vote of the Common Stock, except as otherwise provided by the GCL.

(d) Notwithstanding any other provision of the Charter or Bylaws, the holders of a majority, or greater number if so required by the Charter or the GCL, of the then-outstanding Series B Preferred may consent in writing to any matter for which a class vote is contemplated, which written consent when so executed by the holders of a majority, or such greater number required, of the then-outstanding Series B Preferred will be deemed, subject to applicable Delaware law, to satisfy the applicable voting requirements.

5. **Reacquired Shares**. Any shares of Series B Preferred that are converted, purchased or otherwise acquired by the Corporation in any manner whatsoever shall be retired and canceled promptly after the acquisition thereof. None of such shares of Series B Preferred shall be reissued by the Corporation.

6. **Liquidation, Dissolution or Winding Up**. Upon any liquidation, dissolution or winding up of the Corporation, the holders of shares of Series B Preferred shall be entitled to receive the same distribution paid to the holders of Common Stock, on

an as-converted basis. Neither a consolidation or merger of the Corporation with another corporation or other legal entity, nor a sale or transfer of all or part of the Corporation's assets for cash, securities or other property will be considered a liquidation, dissolution or winding up of the Corporation for purposes of this Section 6.

7. **Conversion**. (a) **Optional Conversion**. Subject to the provisions set forth in Article Ninth, each one share of the Series B Preferred will be convertible at the option of the holder thereof into one fully paid and non-assessable share of Common Stock, subject to adjustment as described below, upon a Fundamental Transaction. If any stockholder purports to convert any shares of Series B Preferred that would violate the provisions of Article Ninth, then the Corporation shall only issue to such stockholder a certificate or certificates for the maximum number of shares of Common Stock that may be issued that would not violate the provisions of Article Ninth. A "Fundamental Transaction" shall mean a Public Company Event, a merger or consolidation of the Corporation with or into another corporation or other legal entity, or the sale of all or substantially all of the Corporation's properties and assets to any other Person which is effected so that holders of Common Stock are entitled to receive (either directly or upon subsequent liquidation) stock, securities or assets with respect to or in exchange for Common Stock. For purposes of this Article Fourth Section D, "A Public Company Event" means an initial firm commitment underwritten offering to the public of the Company's Common Stock pursuant to a registration statement under the Securities Act of 1933, as amended or the registration of the Company's Common Stock under the Securities Exchange Act of 1934, as amended (the "Act").

(b) **Mechanics of Optional Conversion**. The holder of any certificate for Series B Preferred shall be entitled to request conversion of all or part of its Series B Preferred at any time as provided in Section 7(a), by delivering a written notice to the attention of the Secretary or Treasurer of the Corporation at the Corporation's principal place of business of its desire to convert its Series B Preferred and receive a replacement certificate or certificates therefor, specifying the number of shares of Series B Preferred to be so converted and the holder's calculation of the Conversion Rate. In the event of any disagreement between the Corporation and the holder as to the correct Conversion Rate, the Conversion Rate will be finally determined by an investment banking or brokerage firm with no material prior or current relationship with the Corporation or any of its subsidiaries selected by the Board in good faith, the fees and expenses of which will be paid by the Corporation. The Corporation will, promptly upon receipt of all certificates representing Series B Preferred of such holder that are to be converted, issue a certificate or certificates registering the appropriate number of shares of Common Stock to such holder. Upon optional conversion as set forth in Section 7 (a), the shares of Series B Preferred so converted shall be eliminated, and thereafter such shares of Series B Preferred shall become and be known as shares of "Common Stock" without further action on the part of the holder thereof.

(c) **Adjustment for Subdivisions or Combinations of Common Stock**. In the event that the Corporation at any time or from time to time after the issuance of the Series B Preferred effects a subdivision, dividend payable in shares of capital stock, combination or other similar transaction of its outstanding Common Stock

into a greater or lesser number of shares, then and in each such event the Conversion Rate will be increased or decreased proportionately.

(d) **Reorganization, Merger, Consolidation or Sale of Assets**. If at any time or from time to time there shall be a capital reorganization of the Common Stock (other than a subdivision, combination, or dividend payable in shares provided for elsewhere in this Section 7) or a merger or consolidation of the Corporation with or into another corporation or other legal entity, or the sale of all or substantially all of the Corporation's properties and assets to any other Person which is effected so that holders of Common Stock are entitled to receive (either directly or upon subsequent liquidation) stock, securities or assets with respect to or in exchange for Common Stock, then as a part of such capital reorganization, merger, consolidation or sale, proper provision will be made so that each holder of Series B Preferred will thereafter be entitled to receive upon conversion of the Series B Preferred the same number of shares of stock, securities or assets of the Corporation, or of the successor corporation or other legal entity resulting from such merger or consolidation or sale, which such holder would have been entitled to receive on such capital reorganization, merger, consolidation or sale if such holder's Series B Preferred had been converted into Common Stock immediately prior to the record date established for determining holders entitled to such distribution, or if no such record date is established, as of the time of such transaction. In any such case, appropriate adjustment will be made in the application of the provisions of this Section 7(d) with respect to the rights of the holders of the Series B Preferred after the reorganization, merger, consolidation or sale to the end that the provisions of this Section 7(d) (including adjustment of the Conversion Rate then in effect) will be applicable after that event as nearly equivalent as may be practicable. This provision will apply to successive capital reorganizations, mergers, consolidations or sales.

(e) **No Adjustment**. No adjustment to the Conversion Rate will be made if such adjustment would result in a change in the Conversion Rate of less than 0.001%. Any adjustment of less than 0.001% which is not made will be carried forward and will be made at the time of and together with any subsequent adjustment which, on a cumulative basis, amounts to an adjustment of 0.001% or more in the Conversion Rate.

(f) **Certificate as to Adjustments**. Upon the occurrence of each adjustment or readjustment of the Conversion Rate pursuant to this Section 7, the Corporation at its expense will promptly compute such adjustment or readjustment in accordance with the terms hereof and cause independent public accountants selected by the Corporation to verify such computation and prepare and furnish to each holder of Series B Preferred a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation will, upon the written request at any time of any holder of Series B Preferred, furnish or cause to be furnished to such holder a like certificate setting forth (i) such adjustments and readjustments, (ii) the Conversion Rate at that time in effect, and (iii) the amount, if any, of other property which at that time would be received upon the conversion of Series B Preferred.

(g) **Reservation of Stock Issuable Upon Conversion**. The Corporation will at all times reserve and keep available out of its authorized but unissued shares of Common Stock solely for the purpose of effecting the conversion of the shares of the Series B Preferred, such number of its shares of Common Stock as will from time to time be sufficient to effect the conversion of all then-outstanding shares of the Series B Preferred; and if at any time the number of authorized but unissued shares of Common Stock will not be sufficient to effect the conversion of all then-outstanding shares of the Series B Preferred, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as will be sufficient for such purpose.

8. **Rank**. The Series B Preferred will rank on a parity with the Common Stock as to any distributions or upon liquidation, dissolution or winding up.

9. **Notice to Holders**. Any notice given by the Corporation to holders of record of Series B Preferred will be effective if addressed to such holders at their last addresses as shown on the stock books of the Corporation and deposited in the U.S. mail, sent first-class, and will be conclusively presumed to have been duly given, whether or not the holder of the Series B Preferred receives such notice.

10. **Certain Defined Terms**. In addition to the terms defined elsewhere in this Article Fourth Section D, the following terms will have the following meanings when used herein with initial capital letters:

"Conversion Rate" means the number of shares of Common Stock into which each share of Series B Preferred may be converted; and

"Person" means any individual, firm, corporation or other entity and includes any successor (whether by merger or otherwise) of such entity.

FIFTH: The Corporation is to have perpetual existence.

SIXTH: The following provisions are inserted for the management of the business and the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders:

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

(b) The directors shall have concurrent power with the stockholders to make, alter, amend, change, add to or repeal the By-Laws of the Corporation.

(c) The number of directors of the Corporation shall be as from time to time fixed by, or in the manner provided in, the By-Laws of the Corporation. Election of directors need not be by written ballot unless the By-Laws so provide.

(d) No director shall be personally liable to the Corporation or any of its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability

(i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the GCL or (iv) for any transaction from which the director derived an improper personal benefit. Any repeal or modification of this Article Sixth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification with respect to acts or omissions occurring prior to such repeal or modification.

(e) In addition to the powers and authority hereinbefore or by statute expressly conferred upon them, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation, subject, nevertheless, to the provisions of the GCL, this Amended and Restated Certificate of Incorporation, and any By-Laws adopted by the stockholders; provided, however, that no By-Laws hereafter adopted by the stockholders shall invalidate any prior act of the directors which would have been valid if such By-Laws had not been adopted.

SEVENTH: Meetings of stockholders may be held within or without the State of Delaware, as the By-Laws may provide. The books of the Corporation may be kept (subject to any provision contained in the GCL) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the By-Laws of the Corporation.

EIGHTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation. For so long as this Corporation shall control, directly or indirectly, one or more national securities exchange (each, a "Controlled National Securities Exchange"), including but not limited to Miami International Securities Exchange, LLC, or facility thereof, before any amendment to or repeal of any provision of this Amended and Restated Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of each Controlled National Securities Exchange and if the same must be filed with or filed with and approved by the United States Securities and Exchange Commission (the "Commission") before the changes may be effective, under Section 19 of the Act and the rules promulgated under that Act by the Commission or otherwise, then the proposed changes to the Amended and Restated Certificate of Incorporation of this Corporation shall not be effective until filed with or filed with and approved by the Commission, as the case may be.

NINTH: In addition to any limitations on the transfer of shares of the Corporation's capital stock set forth in the By-Laws of the Corporation, the following shall apply to the fullest extent permitted by law for so long as this Corporation shall control, directly or indirectly, a Controlled National Securities Exchange, except as provided in clause (b)(ii) below:

(a) **Definitions**. As used in this Article Ninth:

(i) The term "Person" shall mean a natural person, partnership, corporation, limited liability company, entity, government, or political subdivision, agency or instrumentality of a government;

(ii) The term "Related Persons" shall mean with respect to any Person: (A) any "affiliate" of such Person (as such term is defined in Rule 12b-2 under the Act); (B) any other Person with which such first Person has 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; (C) in the case of a Person that is a company, corporation or similar entity, any executive officer (as defined under Rule 3b-7 under the Act) or director of such Person and, in the case of a Person that is a partnership or limited liability company, any general partner, managing member or manager of such Person, as applicable; (D) in the case of any Person that is a registered broker or dealer that has been admitted to membership in a Controlled National Securities Exchange (an "Exchange Member"), any Person that is associated with the Exchange Member (as determined using the definition of "person associated with a member" as defined under Section 3(a)(21) of the Act); (E) in the case of a Person that is a natural person and Exchange Member, any broker or dealer that is also an Exchange Member with which such Person is associated; (F) in the case of a Person that is a natural person, any relative or spouse of such Person, or any relative of such spouse who has the same home as such Person or who is a director or officer of the Corporation or any of its parents or subsidiaries; (G) 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 (H) 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 company, as applicable; and

(iii) The term "beneficially owned", "own beneficially" or any derivative thereof shall have the meaning set forth in Rule 13d-3 under the Act.

(b) **Limitations.**

(i) For so long as the Corporation shall control, directly or indirectly, a Controlled National Securities Exchange, except as provided in clauses (ii) (A) and (ii) (B) below:

(A) No Person, either alone or together with its Related Persons, may own, directly or indirectly, of record or beneficially, shares constituting more than forty percent (40%) of any class of capital stock of the Corporation;

(B) No Exchange Member, either alone or together with its Related Persons, may own, directly or indirectly, of record or beneficially, shares constituting more than twenty percent (20%) of any class of capital stock of the Corporation; and

(C) No Person, either alone or together with its Related Persons, at any time may, directly, indirectly or pursuant to any voting trust, agreement, plan or other arrangement, vote or cause the voting of shares of the capital stock of the Corporation or give any consent or proxy with respect to shares representing more than twenty percent (20%) of the voting power of the then issued and outstanding capital stock of the Corporation, nor may any Person, either alone or together with its Related Persons, enter into any agreement, plan or other arrangement with any other Person, either alone or together with its Related Persons, under circumstances that would result in the shares of capital stock of the Corporation that are subject to such agreement, plan or other arrangement not being voted on any matter or matters or any proxy relating thereto being withheld, where the effect of such agreement, plan or other arrangement would be to enable any Person, either alone or together with its Related Persons, to vote, possess the right to vote or cause the voting of shares of the capital stock of the Corporation which would represent more than twenty percent (20%) of said voting power.

(ii) Subject to clauses (iii) and (iv) below:

(A) The limitations in clause (i)(A) and (i)(C) above shall not apply in the case of any class of stock that does not have the right by its terms to vote in the election of members of the Board of Directors of the Corporation or on other matters that may require the approval of the holders of voting shares of the Corporation (other than matters affecting the rights, preferences or privileges of said class of stock); and

(B) The limitations in clauses (i)(A) and (i)(C) (except with respect to Exchange Members and their Related Persons) may be waived by the Board of Directors of the Corporation pursuant to a resolution duly adopted by the Board of Directors, if, in connection with the taking of such action, the Board of Directors adopts a resolution stating that it is the determination of such Board that such action will not impair the ability of the Controlled National

Securities Exchange to carry out its functions and responsibilities as an "exchange" under the Act, and the rules and regulations promulgated thereunder; that it is otherwise in the best interests of the Corporation, its stockholders and the Controlled National Securities Exchange and that it will not impair the ability of the Commission to enforce the Act and the rules and regulations promulgated thereunder, and such resolution shall not be effective until it is filed with and approved by the Commission. In making the determinations referred to in the immediately preceding sentence, the Board of Directors may impose on the Person in question and its Related Persons such conditions and restrictions as it may in its sole discretion deem necessary, appropriate or desirable in furtherance of the objectives of the Act and the rules and regulations promulgated thereunder, and the governance of the Controlled National Securities Exchange.

(iii) Notwithstanding clauses (ii)(A) and (ii)(B) above, in any case where a Person, either alone or together with its Related Persons, would own or vote more than any of the above percentage limitations upon consummation of any proposed sale, assignment or transfer of the Corporation's capital stock, such sale, assignment or transfer shall not become effective until the Board of Directors of the Corporation shall have determined, by resolution, that such Person and its Related Persons are not subject to any applicable "statutory disqualification" (within the meaning of Section 3(a)(39) of the Act).

(iv) Notwithstanding clauses (ii)(A) and (ii)(B) above, and without giving effect to the same, any Person that either alone or together with its Related Persons proposes to own, directly or indirectly, of record or beneficially, shares of the capital stock of the Corporation constituting more than forty percent (40%) of the outstanding shares of any class of capital stock of the Corporation, or to exercise voting rights, or grant any proxies or consents with respect to shares of the capital stock of the Corporation constituting more than twenty percent (20%) of the voting power of the then issued and outstanding shares of capital stock of the Corporation, shall have delivered to the Board of Directors of the Corporation a notice in writing, not less than forty-five (45) days (or any shorter period to which said Board shall expressly consent) before the proposed ownership of such shares, or the proposed exercise of said voting rights or the granting of said proxies or consents, of its intention to do so.

(c) **Required Notices.**

(i) Any Person that, either alone or together with its Related Persons, owns, directly or indirectly (whether by acquisition or by a change in the number of shares outstanding), of record or beneficially five percent (5%) or more of the then outstanding shares of capital stock of the Corporation (excluding shares of any class of stock that does not have the right by its terms to vote generally in the election of members of the Board of Directors of the Corporation) shall, immediately upon acquiring knowledge of its ownership of five percent (5%) or more of the then outstanding shares of such stock, give the Board of Directors written notice of such ownership, which notice shall state: (A) such Person's full legal name; (B) such Person's title or status and the date on which such title or status was acquired; (C) such Person's (and its Related Person's) approximate ownership interest of the Corporation; and (D) whether such Person has the power, directly or indirectly, to direct the management or policies of the Corporation, whether through ownership of securities, by contract or otherwise.

(ii) Each Person required to provide written notice pursuant to subparagraph (c)(i) of this Article Ninth shall update such notice promptly after any change in the contents of that notice; provided that no such updated notice shall be required to be provided to the Board of Directors (A) in the event of an increase or decrease in the ownership percentage so reported of less than one percent (1%) of the then outstanding shares of any class of capital stock (such increase or decrease to be measured cumulatively from the amount shown on the last such notice), unless any increase or decrease of less than one percent (1%) results in such Person owning more than twenty percent (20%) or more than forty percent (40%) of the shares of any class of capital stock then outstanding (at a time when such Person previously owned less than such percentages) or such Person owning less than twenty percent (20%) or less than forty percent (40%) of the shares of any class of capital stock then outstanding (at a time when such Person previously owned more than such percentages); or (B) in the event the Corporation issues additional shares of capital stock (or securities convertible into capital stock) or takes any other action that dilutes the ownership of such Person, or acquires or redeems shares of outstanding capital stock or takes any other action that increases the ownership of such Person, in each case without any change in the number of shares held by such Person.

(iii) The Board of Directors of the Corporation shall have the right to require any Person reasonably believed to be subject to and in violation of this Article Ninth to provide the Corporation complete

information as to all shares of stock of the Corporation owned, directly or indirectly, of record or beneficially, by such Person and its Related Persons and as to any other factual matter relating to the applicability or effect of this Article Ninth as may reasonably be requested of such Person.

(d) **Effect of Purported Transfers and Voting in Violation of this Article.** If any stockholder purports to sell, transfer, assign or pledge to any Person, other than the Corporation, any shares of the Corporation that would violate the provisions of this Article Ninth, then the Corporation shall record on the books of the Corporation the transfer of only that number of shares that would not violate the provisions of this Article Ninth and shall treat the remaining shares as owned by the purported transferor, for all purposes, including without limitation, voting, payment of dividends and distributions with respect to such shares whether upon liquidation or otherwise. If any stockholder purports to vote, or to grant any proxy or enter into any agreement, plan or other arrangement relating to the voting of, shares that would violate the provisions of this Article Ninth, then the Corporation shall not honor such vote, proxy, agreement, plan or other arrangement to the extent that such provisions would be violated, and any shares subject to that arrangement shall not be entitled to be voted to the extent of such violation.

(e) **Right to Redeem Shares Purportedly Transferred or Owned in Violation of this Article.** If any stockholder purports to sell, transfer, assign, pledge or own any shares of the Corporation in violation of the provisions of this Article Ninth, then the Corporation shall have the right to, and shall promptly after confirming such violation and to the extent funds are legally available, redeem the shares sold, transferred, assigned, pledged, or owned in violation of the provisions of this Article Ninth for a price per share equal to the par value of those shares. The number of shares to be redeemed by the Corporation pursuant to the foregoing provision shall be calculated by the Corporation after taking into account that such redeemed shares shall become treasury shares and shall no longer be deemed to be outstanding. Written notice shall be given by the Secretary of the Corporation to the holder or holders of record with respect to the redeemable shares at the address of the holder or holders of record appearing on the books of the Corporation, which notice shall specify a date for redemption of the shares that shall be not less than ten (10) days nor more than thirty (30) days from the date of such notice. Any shares which have been so called for redemption shall not be deemed outstanding shares for the purpose of voting or determining the total number of shares entitled to vote on any matter on and after the date on which written notice of redemption has been given to the holder or holders of those shares if a sum sufficient to redeem such shares shall have been irrevocably deposited or set aside to pay the redemption price to the holder or holders of the shares upon surrender of certificates for those shares. 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 by the Corporation 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. Written notice shall be given by the Secretary of the Corporation to all holders of record appearing on the books of the Corporation of any redemption by the Corporation (including, without limitation, a redemption pursuant to this clause (e)) (in

each case, a "Redemption") not more than ten (10) days after consummation of the Redemption, which notice shall specify the number of shares outstanding after the Redemption of each class of the Corporation's capital stock. In the event that any redemption has resulted in any additional stockholder owning such number of shares of the Corporation that is in violation of the provisions of this Article Ninth, the Corporation shall have the right to and shall promptly after confirming such violation, redeem such shares pursuant to the provisions of this Article Ninth.

TENTH:

(a) **Indemnification**. The Corporation shall provide indemnification for members of its Board of Directors, members of committees of the Board of Directors and of other committees of the Corporation, and its executive officers, and may provide indemnification for its other officers and its agents and employees, and those serving another corporation, partnership, joint venture, trust or other enterprise at the request of the Corporation, in each case to the maximum extent permitted by Delaware law; provided, however, that the Corporation may limit the extent of such indemnification by individual contracts with its directors and executive officers; and, provided, further, that the Corporation 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 Corporation 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 of the Corporation or (iii) such indemnification is provided by the Corporation, in its sole discretion, pursuant to the powers vested in the Corporation under the General Corporation Law of Delaware.

(b) **Limitation of Liability**. To the fullest extent not prohibited by the General Corporation Law of the State of Delaware, as it exists on the date this Amended and Restated Certificate of Incorporation is adopted or as such law may later be amended, no director of the Corporation shall be liable to the Corporation or its stockholders for monetary damages for any breach of fiduciary duty as a director. No amendment to or repeal of this Article shall adversely affect any right or protection of a director of the Corporation that exists at the time of such amendment or repeal with respect to any actions taken, or inactions, prior thereto.

AMENDED AND RESTATED
BY-LAWS
OF
MIAMI INTERNATIONAL HOLDINGS, INC.
(hereinafter called the "Corporation")

ARTICLE I
OFFICES

Section 1. Registered Office. The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 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.

ARTICLE II
MEETINGS OF STOCKHOLDERS

Section 1. Place of Meetings. Meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, either within or without the State of Delaware as shall be designated from time to time by the Board of Directors.

Section 2. Annual Meetings of Stockholders. The Annual Meetings of Stockholders for the election of directors shall be held on such date and at such time as shall be designated from time to time by the Board of Directors. Any other proper business may be transacted at the Annual Meeting of Stockholders.

Section 3. Special Meetings of Stockholders. Unless otherwise required by law or by the certificate of incorporation of the Corporation, as amended and restated from time to time (the "Certificate of Incorporation"), Special Meetings of Stockholders, for any purpose or purposes, may be called by either (i) the Board of Directors, (ii) the Chairman, (iii) the Chief Executive Officer, (iv) the President, or (iv) stockholders owning a majority of the capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting. At a Special Meeting of Stockholders, only such business shall be conducted as shall be specified in the notice of meeting (or any supplement thereto).

Section 4. Notice. Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, date and hour of the meeting, and, in the case of a Special Meeting, the purpose or purposes for which the meeting is called. Unless otherwise required by law, the written notice of any meeting shall be given not less than ten (10) days nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting.

Section 5. Adjournments. Any meeting of the stockholders may be adjourned from time to time to reconvene at the same or some other place, and 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. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 6. Quorum. Unless otherwise required by law or the Certificate of Incorporation, the holders of a majority of the capital stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business. A quorum, once established, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, in the manner provided in Section 5, until a quorum shall be present or represented.

Section 7. Voting. Unless otherwise required by law, the Certificate of Incorporation or these By-Laws, any question brought before any meeting of stockholders, shall be decided by the vote of the holders of a majority of the total number of votes of the capital stock represented and entitled to vote thereat, voting as a single class. Unless otherwise provided in the Certificate of Incorporation, and subject to Section 5 of Article VIII hereof, each stockholder represented at a meeting of stockholders shall be entitled to cast one (1) vote for each share of the capital stock entitled to vote thereat held by such stockholder. Such votes may be cast in person or by proxy but no proxy shall be voted on or after three (3) years from its date, unless such proxy provides for a longer period. The Board of Directors, in its discretion, or the officer of the Corporation presiding at a meeting of stockholders, in such officer's discretion, may require that any votes cast at such meeting shall be cast by written ballot.

Section 8. Consent of Stockholders in Lieu of Meeting. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted to be taken at any Annual or Special Meeting of Stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents 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 thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. 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 therein unless, within sixty (60) days of the earliest dated consent delivered in the manner required by this Section 8 to the Corporation, written consents

signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in the state of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. 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 consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Corporation as provided above in this Section 8.

Section 9. List of Stockholders Entitled to Vote. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, 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, 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, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list 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 stockholder of the Corporation who is present.

Section 10. Stock Ledger. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by Section 9 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of stockholders.

Section 11. Conduct of Meetings. The Board of Directors may adopt by resolution such rules and regulations for the conduct of the meeting of the stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of any meeting of the stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, 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 chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting, (ii) the determination of when the polls shall open and close for any given matter to be voted on at the meeting, (iii) rules and procedures for maintaining order at the meeting and the safety of those present, (iv) 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 chairman of the meeting shall determine, (v) restrictions on entry to the meeting after the time fixed for the commencement thereof and (vi) limitations on the time allotted to questions or comments by participants.

ARTICLE III
DIRECTORS

Section 1. Number, Term and Election of Directors.

(a) The Board of Directors shall consist of not less than three (3) nor more than thirty-one (31) members including the Chief Executive Officer of the Corporation, the exact number of which shall initially be three (3) and, thereafter, as determined from time to time by the Board of Directors. Except as provided in Section 2 of this Article III, directors shall be elected by a plurality of the votes cast at the Annual Meetings of Stockholders, and each director so elected shall hold office until the next Annual Meeting of Stockholders and until such director's successor is duly elected and qualified, or until such director's earlier death, resignation or removal. Any director may resign at any time upon written notice to the Corporation. Directors need not be stockholders. No person that is subject to any statutory disqualification as defined in Section 3(a)(39) of the Securities Exchange Act of 1934, as amended (the "Act") may be a director of the Corporation.

(b) The Board term of the Chief Executive Officer shall expire when such individual ceases to be Chief Executive Officer of the Company.

Section 2. Vacancies. Unless otherwise required by law or the Certificate of Incorporation, vacancies arising through death, resignation, removal, an increase in the number of directors or otherwise may be filled only by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next Annual Meeting of Stockholders and until their successors are duly elected and qualified, or until their earlier death, resignation or removal.

Section 3. Duties and Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these By-Laws required to be exercised or done by the stockholders.

Section 4. Chairman of the Board of Directors. The Chairman of the Board of Directors shall preside at all meetings of the stockholders and of the Board of Directors. The Chairman of the Board of Directors shall be appointed by the Board of Directors, and, except where by law the signature of the Chief Executive Officer or the President is required, the Chairman of the Board of Directors shall possess the same power as the Chief Executive Officer or the President to sign all contracts, certificates and other instruments of the Corporation which may be authorized by the Board of Directors. During the absence or disability of the Chief Executive Officer or the President if there is no Chief Executive Officer, the Chairman of the Board of Directors shall exercise all the powers and discharge all the duties of the Chief Executive Officer or the President, respectively. The Chairman of the Board of Directors shall also perform such other duties and may exercise such other powers as may be assigned, from time to time, by these By-Laws or by the Board of Directors.

Section 5. Meetings. The Board of Directors may hold meetings, both regular and special, either within or without the State of Delaware. The annual meeting of the Board of Directors shall be held immediately before or after the Annual Meeting of Stockholders and at the place where such meeting is held. No notice of an annual meeting of the Board of Directors shall be necessary and such meeting shall be held for the purpose of electing officers and transaction such other business as may lawfully come before it. Regular meetings of the Board of Directors may be held without notice at such time and at such place as may from time to time be determined by the Board of Directors. Special meetings of the Board of Directors may be called by the Chairman, the Chief Executive Officer, the President, or by any director. Notice thereof stating the place, date and hour of the meeting shall be given to each director either by mail not less than forty-eight (48) hours before the date of the meeting, by telephone or electronic mail on twenty-four (24) hours' notice, or on such shorter notice as the person or persons calling such meeting may deem necessary or appropriate in the circumstances.

Section 6. Quorum and Voting. Except as otherwise required by law or the Certificate of Incorporation or as otherwise specified in these By-Laws, at all meetings of the Board of Directors, a majority of the entire Board of Directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors. If a quorum shall not be present at any meeting of the Board of Directors, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting of the time and place of the adjourned meeting, until a quorum shall be present.

Section 7. Actions by Written Consent. Unless otherwise provided in the Certificate of Incorporation, or these By-Laws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all the members of the Board of Directors or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board of Directors or committee.

Section 8. Meetings by Means of Conference Telephone. Unless otherwise provided in the Certificate of Incorporation, members of the Board of Directors, or any committee thereof, may participate in a meeting of the Board of Directors or such committee by means of a 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 Section 8 shall constitute presence in person at such meeting.

Section 9. Committees.

(a) The committees of the Board of Directors shall consist of an Audit Committee and such other standing or special committees as the Board of Directors may designate, by resolution approved by a majority of the entire Board of Directors. Each committee shall consist of one or more of the directors of the Corporation appointed by the Board of Directors. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of any such committee. In the absence or disqualification of a member of a committee, and in the absence of a designation

by the Board of Directors of an alternate member to replace the absent or disqualified member, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any absent or disqualified member. Any committee, to the extent permitted by law and provided in the resolution establishing such 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, and may authorize the seal of the Corporation to be affixed to all papers which may require it. Each committee shall keep regular minutes and report to the Board of Directors when required.

(b) The Audit Committee shall consist of at least three directors. The exact number of Audit Committee members shall be determined from time to time by the Board of Directors. A majority of the members of the Audit Committee shall be Independent Directors. The Audit Committee shall select, evaluate and, where appropriate, replace the Corporation's independent auditors (or nominate the independent auditors to be proposed for ratification by the stockholders of the Corporation). The Audit Committee shall have such other 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. "Independent Director" means a director who has no material relationship with the Corporation or any subsidiary or affiliate of the Corporation, or any Exchange Member or any affiliate of any such Exchange Member; provided, however, that an individual who otherwise qualifies as an Independent Director shall not be disqualified from serving in such capacity solely because such director is a director of the Corporation or any subsidiary of the Corporation. "Exchange Member" means any registered broker or dealer that has been admitted to membership in any national securities exchange operated by the Corporation or any subsidiary or affiliate of the Corporation.

Section 10. Compensation. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary as director, payable in cash or securities. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings.

Section 11. Interested Directors. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association, or other organization in which one or more of its directors or officers are directors 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 of Directors or committee thereof which authorizes the contract or transaction, or solely because the director or officer's vote is counted for such purpose if (i) the material facts as to the director or officer's 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 vote of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or (ii) the material facts as to the director or officer's 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 (iii) 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 thereof 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 which authorizes the contract or transaction.

ARTICLE IV
OFFICERS

Section 1. General. The officers of the Corporation shall be chosen by the Board of Directors and shall be a Chief Executive Officer, a President, a Secretary and a Treasurer. The Board of Directors, in its discretion, also may choose one or more Vice Presidents, Assistant Secretaries, Assistant Treasurers and other officers. Any number of offices may be held by the same person, unless otherwise prohibited by law or the Certificate of Incorporation. The officers of the Corporation need not be stockholders of the Corporation nor need such officers be directors of the Corporation. No person that is subject to any statutory disqualification (as defined in Section 3(a) (39) of the Act) may be an officer of the Corporation.

Section 2. Election. The Board of Directors, at its first meeting held after each Annual Meeting of Stockholders (or action by written consent of stockholders in lieu of the Annual Meeting of Stockholders), shall elect the officers of the Corporation who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors; and all officers of the Corporation shall hold office until their successors are chosen and qualified, or until their earlier death, resignation or removal. Any officer elected by the Board of Directors may be removed at any time by the affirmative vote of a majority of the Board of Directors. Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors. The salaries of all officers of the Corporation shall be fixed by the Board of Directors.

Section 3. Chief Executive Officer. The Chief Executive Officer shall be the chief executive officer of the Company, shall have general supervision over the business and affairs of the Company and shall serve at the pleasure of the Board. The Chief Executive Officer shall have all powers and duties usually incident to the office of the Chief Executive Officer, except as specifically limited by a resolution of the Board. The Chief Executive Officer shall exercise such other powers and perform such other duties as may be assigned to the Chief Executive Officer from time to time by the Board.

Section 4. President. The President shall, in the absence of the Chairman, the Vice Chairman (if any) and Chief Executive Officer, preside at all meetings of the Board at which the President is present. The President shall have general supervision over the operations of the Company. The President shall have all powers and duties usually incident to the office of the President, except as specifically limited by a resolution of the Board. The President shall exercise such other powers and perform such other duties as may be assigned to the President from time to time by the Board.

Section 5. Vice Presidents. The Board shall appoint one or more Vice Presidents. In the absence or disability of the President or if the office of President becomes vacant, the Vice Presidents in the order determined by the Board, or if no such determination has been made, in the order of their seniority, shall perform the duties and exercise the powers of the President, subject to the right of the Board at any time to extend or restrict such powers and duties or to assign them to others. Any Vice President may have such additional designations in such Vice President's title as the Board may determine. The Vice Presidents shall generally assist the President in such manner as the President shall direct. Each Vice President shall exercise such other powers and perform such other duties as may be assigned to such Vice President from time to time by the Board, the Chief Executive Officer or the President. The term "Vice President" used in this Section shall include the positions of Executive Vice President, Senior Vice President, and Vice President.

Section 6. Secretary. The Secretary shall act as Secretary of all meetings of the Board at which the Secretary is present, shall record all the proceedings of all such meetings in a book to be kept for that purpose, shall have supervision over the giving and service of notices of the Company, and shall have supervision over the care and custody of the books and records of the Company. The Secretary shall be empowered to affix the Company's seal, if any, to documents, the execution of which on behalf of the Company under its seal is duly authorized, and when so affixed, may attest the same. The Secretary shall have all powers and duties usually incident to the office of Secretary, except as specifically limited by a resolution of the Board. The Secretary shall exercise such other powers and perform such other duties as may be assigned to the Secretary from time to time by the Board, the Chief Executive Officer or the President.

Section 7. Treasurer. The Treasurer shall have general supervision over the care and custody of the funds and over the receipts and disbursements of the Company and shall cause the funds of the Company to be deposited in the name of the Company in such banks or other depositories as the Board may designate. The Treasurer shall have supervision over the care and safekeeping of the securities of the Company. The Treasurer shall have all powers and duties usually incident to the office of Treasurer except as specifically limited by a resolution of the Board. The Treasurer shall exercise such other powers and perform such other duties as may be assigned to the Treasurer from time to time by the Board, the Chief Executive Officer or the President.

Section 8. Assistant Secretaries. In the absence of the Secretary or in the event of the Secretary's inability or refusal to act, any Assistant Secretary, approved by the Board, shall exercise all powers and perform all duties of the Secretary. An Assistant Secretary shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Secretary from time to time by the Board or the Secretary.

Section 9. Assistant Treasurers. In the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, any Assistant Treasurer, approved by the Board, shall exercise all powers and perform all duties of the Treasurer. An Assistant Treasurer shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Treasurer from time to time by the Board or the Treasurer.

Section 10. Other Officers. Such other officers as the Board of Directors may choose shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors. The Board of Directors may delegate to any other officer of the Corporation the power to choose such other officers and to prescribe their respective duties and powers.

ARTICLE V
BOARD OF ADVISORS

Section 1. Membership. The Board of Directors may appoint any person or persons to act in an advisory capacity to the Corporation. Such a group shall be known as the Board of Advisors and shall operate under an Advisory Board Charter approved by the Corporation's Board of Directors.

Section 2. Powers. The Board of Advisors shall be an advisory-only body to the Corporation. They shall have no power to bind the Corporation to any particular position or course of action.

ARTICLE VI
VOTING SECURITIES OWNED BY THE CORPORATION

Section 1. General Power to Vote. Unless otherwise instructed by the Board of Directors, and subject to Section 2 below, the Chairman or the Chief Executive Officer of the Corporation shall have the power and authority on behalf of the Corporation to attend and to vote at any meeting of stockholders, partners or equity holders of any corporation, partnership or any other entity (including, but not limited to, Miami International Securities Exchange, LLC, Miami International Futures Exchange, LLC and Miami International Technologies, LLC) in which the Corporation may hold stock, partnership or other equity interests, as the case may be, and may exercise on behalf of the Corporation any and all of the rights and powers incident to the ownership of such stock, partnership or other equity interest at such meeting, and shall have the power and authority to execute and deliver proxies, waivers and consents on behalf of the Corporation in connection with the exercise by the Corporation of the rights and powers incident to the ownership of such stock, partnership or other equity interest. The Board of Directors may from time to time confer like powers upon any other person or persons.

Section 2. Meeting of LLC Members or Stockholders of a Controlled National Securities Exchange. At any meeting of stockholders or meeting of the holders of LLC interests of any national securities exchange which this Corporation shall control, directly or indirectly (each, a "Controlled National Securities Exchange"), including but not limited to Miami International Securities Exchange, LLC (the "Equityholders"), held for the purpose of electing directors and members of the Member Nominating Committee of such Controlled National Securities Exchange (as set forth in the By-Laws of such Controlled National Securities Exchange, the "Member Nominating Committee"), or in the event written consents are solicited or otherwise sought from the Equityholders of such Controlled National Securities Exchange with respect thereto, the Corporation shall cause all outstanding shares of such Controlled National Securities Exchange owned by the Corporation and entitled to vote at such election to

be voted in favor of only those Controlled National Securities Exchange member representative directors and nominees for the Member Nominating Committee nominated in accordance with the By-Laws of such Controlled National Securities Exchange and, with respect to any such written consents, shall cause to be validly executed only such written consents electing only such directors and members of the Member Nominating Committee.

ARTICLE VII
SRO FUNCTION OF A CONTROLLED NATIONAL SECURITIES EXCHANGE

Section 1. Non-Interference. For so long as the Corporation shall control any Controlled National Securities Exchange, the directors, officers, employees and agents of the Corporation shall give due regard to the preservation of the independence of the self-regulatory function of each Controlled National Securities Exchange and to its obligations to investors and the general public and shall not take any actions which would interfere with the effectuation of any decisions by the Board of Directors of each Controlled National Securities Exchange relating to its regulatory functions (including disciplinary matters) or which would interfere with the ability of each Controlled National Securities Exchange to carry out its responsibilities under the Act. No present or past stockholder, employee, beneficiary, agent, customer, creditor, regulatory authority (or member thereof) or other person or entity shall have any rights against the Corporation or any director, officer, employee or agent of the Corporation under this Section 1.

Section 2. Confidentiality. All books and records of each Controlled National Securities Exchange reflecting confidential information pertaining to the self-regulatory function of such Controlled National Securities Exchange (including but not limited to disciplinary matters, trading data, trading practices and audit information) that shall come into the possession of the Corporation, and the information contained in those books and records, shall be retained in confidence by the Corporation and the members of the board of directors, officers, employees and agents of the Corporation and shall not be used for any non-regulatory purposes. Notwithstanding the foregoing sentence, nothing in these By-Laws shall be interpreted so as to limit or impede the rights of the Securities and Exchange Commission (the "Commission") or each Controlled National Securities Exchange 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 or each Controlled National Securities Exchange.

Section 3. Books and Records. All books and records of the Corporation shall be maintained at a location within the United States. To the extent they are related to the activities of a Controlled National Securities Exchange, the books, records, premises, officers, directors, agents, and employees of the Corporation shall be deemed to be the books, records, premises, officers, directors, agents and employees of each Controlled National Securities Exchange for the purposes of, and subject to oversight pursuant to, the Act. For so long as the Corporation shall control, directly or indirectly, a Controlled National Securities Exchange, the Corporation's books and records shall be subject at all times to inspection and copying by the Commission and

each Controlled National Securities Exchange, provided that such books and records are related to the operation or administration of such Controlled National Securities Exchange.

Section 4. Cooperation with the Securities and Exchange Commission. The Corporation shall comply with the federal securities laws and the rules and regulations promulgated thereunder and shall cooperate with the Commission and each Controlled National Securities Exchange pursuant to and to the extent of their respective regulatory authority. The officers, directors, employees and agents of the Corporation, by virtue of their acceptance of such position, shall comply with the federal securities laws and the rules and regulations promulgated thereunder and shall be deemed to agree to cooperate with the Commission and each Controlled National Securities Exchange in respect of the Commission's oversight responsibilities regarding each Controlled National Securities Exchange and the self-regulatory functions and responsibilities of each Controlled National Securities Exchange, and the Corporation shall take reasonable steps necessary to cause its officers, directors, employees and agents to so cooperate. No present or past stockholder, employee, beneficiary, agent, customer, creditor, regulatory authority (or member thereof) or other person or entity shall have any rights against the Corporation or any director, officer, employee or agent of the Corporation under this Section 4.

Section 5. Consent to Jurisdiction. The Corporation and its officers, directors, employees and agents, by virtue of their acceptance of such position, shall be deemed to irrevocably submit to the jurisdiction of the United States federal courts, Commission, and each Controlled National Securities Exchange, for the purposes of any suit, action or proceeding pursuant to the United States federal securities laws, and the rules or regulations thereunder, arising out of, or relating to, the activities of each Controlled National Securities Exchange, and by virtue of their acceptance of any such position, shall be deemed to 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 it or they are not personally subject to the jurisdiction of the United States federal courts, Commission or each Controlled National Securities Exchange, 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 of that suit, action or proceeding may not be enforced in or by such courts or agency. The Corporation and its officers, directors, employees and agents also agree that they will maintain an agent, in the United States, for the service of process of a claim arising out of, or relating to, the activities of each Controlled National Securities Exchange.

Section 6. Consent to Application. The Corporation shall take reasonable steps necessary to cause its officers, directors, employees and agents, prior to accepting a position as an officer, director, employee or agent, as applicable, of the Corporation to consent in writing to the applicability to them of this Article VII, as applicable, with respect to their activities related to each Controlled National Securities Exchange.

ARTICLE VIII
STOCK

Section 1. Form of Certificates. Every holder of stock in the Corporation shall be entitled to have a certificate signed, in the name of the Corporation (i) by the Chairman of the Board of Directors, the President or a Vice President and (ii) by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the Corporation, certifying the number of shares owned by such stockholder in the Corporation.

Section 2. Signatures. Any or all of the signatures on a certificate 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.

Section 3. Lost Certificates. The Board of Directors may direct a new certificate to be issued in place of any certificate 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, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate, or the owner's legal representative, to advertise the same in such manner as the Board of Directors shall require and/or 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 or the issuance of such new certificate.

Section 4. Transfers. Stock of the Corporation shall be transferable in the manner prescribed by law and in these By-Laws. Transfers of stock shall be made on the books of the Corporation only by the person named in the certificate or by such person's attorney lawfully constituted in writing and upon the surrender of the certificate therefor, which shall be cancelled before a new certificate shall be issued. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing from and to whom transferred.

Section 5. Record Date.

(a) In order that the Corporation may determine the stockholders entitled to notice of or to vote at 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 not be more than sixty (60) days nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining 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 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 adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, 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 not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in this State, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolutions taking such prior action.

(c) 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 the stockholders 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 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 be not more than sixty (60) days prior to such action. If no record date is fixed by the Board of Directors, 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.

Section 6. Record Owners. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by law.

ARTICLE IX
NOTICES

Section 1. Notices. To the extent permitted by law, any notice required to be given by these By-Laws 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 1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient. Whenever, by any provisions of statute, the Certificate of Incorporation, these By-Laws or otherwise, any notice is required to be given any specified number of days before any meeting or event, the day on which such notice was given shall be counted but the day of such meeting or other event shall not be counted in determining whether or not notice has been given in proper time in a particular case.

Section 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 By-Laws, 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 3. Waivers of Notice. Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these By-Laws, or otherwise, a written waiver thereof, signed by the person entitled to notice, or such person's 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 written waiver duly signed. 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 written waiver of notice.

ARTICLE X
GENERAL PROVISIONS

Section 1. Dividends. Dividends upon the capital stock of the Corporation, subject to the requirements of the General Corporation Law of the State of Delaware as set forth in Title 8 of the Delaware Code and the provisions, if any, of the Certificate of Incorporation, may be declared by the Board of Directors at any regular or special meeting of the Board of Directors (or any action by written consent in lieu thereof in accordance with Section 7 of Article III hereof), and may be paid in cash, in property, or in shares of the Corporation's capital stock. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, deems proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for any proper purpose, and the Board of Directors may modify or abolish any such reserve.

Section 2. Disbursements. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 3. Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 4. Corporate Seal. The corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the words "Corporate Seal, Delaware." The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE XI
INDEMNIFICATION

Section 1. Indemnification of Directors, Officers, Employees and Other Agents. The Corporation shall indemnify its directors and executive officers to the fullest extent not prohibited by the Delaware General Corporation Law; provided, however, that the Corporation may limit the extent of such indemnification by individual contracts with its directors and executive officers; and, provided, further, that the Corporation shall not be required to indemnify any director or executive officer in connection with any proceeding (or part thereof) initiated by such person or any proceeding by such person against the Corporation 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 of the Corporation or (iii) such indemnification is provided by the Corporation, in its sole discretion, pursuant to the powers vested in the Corporation under the Delaware General Corporation Law.

(a) **Other Officers, Employees and Other Agents**. The Corporation shall have the power to indemnify its other officers, employees and other agents as set forth in the Delaware General Corporation Law.

(b) **Expenses**. The Corporation shall advance to any person who was or is a party or is threatened to be made a party to 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 executive officer, of the Corporation, or is or was serving at the request of the Corporation as a director or executive officer of another Corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or executive officer in connection with such proceeding upon receipt of an undertaking by or on behalf of such person to repay said amounts if it should be determined ultimately that such person is not entitled to be indemnified under this Bylaw or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this Bylaw, no advance shall be made by the Corporation to an executive officer of the Corporation (except by reason of the fact that such executive officer is or was a director of the Corporation in which event this paragraph shall not apply) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by the Board of Directors by a majority vote of a quorum consisting of directors who were not parties to the proceeding, or (ii) if such quorum is not obtainable, or, even if obtainable, a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the Corporation.

(c) **Enforcement**. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and executive officers under this Bylaw shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the Corporation and the director or executive officer. Any right to

indemnification or advances granted by this Bylaw to a director or executive officer shall be enforceable by or on behalf of the person holding such right in the forum in which the proceeding is or was pending or, if such forum is not available or a determination is made that such forum is not convenient, in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within ninety (90) days of request therefor. The claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting his claim. The Corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the Delaware General Corporation Law for the Corporation to indemnify the claimant for the amount claimed. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel or its Stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel or its Stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct.

(d) **Non Exclusivity of Rights**. To the fullest extent permitted by the Corporation's Certificate of Incorporation and the Delaware General Corporation Law, the rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding office. The Corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent permitted by the Delaware General Corporation Law and the Corporation's Certificate of Incorporation.

(e) **Survival of Rights**. The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director or executive officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

(f) **Insurance**. The Corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this Bylaw.

(g) **Amendments**. Any repeal or modification of this Bylaw shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the Corporation.

(h) **Saving Clause**. If this Bylaw or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each director and executive officer to the fullest extent permitted by any applicable portion of this Bylaw that shall not have been invalidated, or by any other applicable law.

(i) **Certain Definitions**. For the purposes of this Bylaw, the following definitions shall apply:

(1) The term "proceeding" shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement and appeal of any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative, arbitrative or investigative.

(2) The term "expenses" shall be broadly construed and shall include, without limitation, court costs, attorneys' fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding, including expenses of establishing a right to indemnification under this Bylaw or any applicable law.

(3) The term the "Corporation" shall include, in addition to the resulting Corporation, any constituent Corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent Corporation, or is or was serving at the request of such constituent Corporation as a director, officer, employee or agent of another Corporation, partnership, limited liability company, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Bylaw with respect to the resulting or surviving Corporation as he would have with respect to such constituent Corporation if its separate existence had continued.

(4) References to a "director," "officer," "employee," or "agent" of the Corporation shall include, without limitation, situations where such person is serving at the request of the Corporation as a director, officer, employee, trustee or agent of another Corporation, partnership, joint venture, trust or other enterprise.

Section 2. Corporation Not Liable.

(a) The Corporation shall not be liable for any loss or damage sustained by a current or former Exchange Member growing out of the use or enjoyment by such current or former Exchange Member of the facilities afforded by the Corporation or its subsidiaries, including, without limitation, a Controlled National Securities Exchange. The term "Exchange Member" shall have the meaning given such term in the By-Laws and Rules of a Controlled National Securities Exchange.

(b) The Corporation shall not be liable for any loss or damage sustained by a current or former participant of the Miami International Futures Exchange, LLC ("MIAX Futures") growing out of the use or enjoyment by such participant of the MIAX Futures of the facilities afforded by the Corporation or its subsidiaries, including, without limitation, the Miami International Futures Exchange, LLC.

ARTICLE XII
AMENDMENTS

Section 1. Amendments. These By-Laws may be altered, amended or repealed, in whole or in part, or new By-Laws may be adopted by the stockholders or by the Board of Directors, provided, however, that notice of such alteration, amendment, repeal or adoption of new By-Laws be contained in the notice of such meeting of stockholders or Board of Directors as the case may be. All such amendments must be approved by either the holders of a majority of the outstanding capital stock entitled to vote thereon or by a majority of the entire Board of Directors then in office. For so long as the Corporation shall control, directly or indirectly, a Controlled National Securities Exchange before any amendment to or repeal of any provision of the By-Laws of the Corporation shall be effective, those changes shall be submitted to the Board of Directors of a Controlled National Securities Exchange and if the same must be filed with or filed with and approved by the Commission before the changes may be effective, under Section 19 of the Act and the rules promulgated under the Act by the Commission or otherwise, then the proposed changes to the By-Laws of the Corporation shall not be effective until filed with or filed with and approved by the Commission, as the case may be.

Section 2. Entire Board of Directors. As used in this Article XII and in these By-Laws generally, the term "entire Board of Directors" means the total number of directors which the Corporation would have if there were no vacancies.

* * *

Adopted as of: June 27, 2015

B

State of Delaware
Secretary of State
Division of Corporations
Delivered 12:35 PM 06/17/2011
FILED 12:35 PM 06/17/2011
SRV 110734849 - 4420452 FILE

STATE OF DELAWARE
AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF
MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

This filing has been executed and filed in accordance with Section 18-208 of the Limited Liability Company Act. This document is being executed for the purpose of amending and restating the original Certificate of Formation, filed under Miami International Stock Exchange. LLC on September 10, 2007, as amended by the Certificate of Amendment, filed on April 21, 2010 under file number: 4420452.

FIRST: The name of the limited liability company is **Miami International Securities, Exchange LLC.**

SECOND: The address of its registered office in the State of Delaware is 3422 Old Capitol Trail, Suite 700, Wilmington, DE 19808-6192, County of New Castle. The name of its registered agent at such address is **Delaware Business Incorporations, Inc.**

THIRD: The members agree to be bound by the signed limited liability company agreements except as they may be contradicted by the Limited Liability Company Act of the State of Delaware.

FOURTH: The duration of this limited liability company will be perpetual.

IN WITNESS WHEREOF, the undersigned, an authorized person, has executed this Amended and Restated Certificate of Formation on this date of June 17, 2011.

MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

By: _____

Thomas P. Gallagher
Chairman

SECOND AMENDED AND RESTATED
LIMITED LIABILITY COMPANY AGREEMENT
OF
MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC
(a Delaware limited liability company)

Miami International Holdings, Inc., a Delaware corporation, the sole member (the "LLC Member") of Miami International Securities Exchange, LLC, a Delaware limited liability company (the "Company"), pursuant to and in accordance with the Delaware Limited Liability Company Act, 6 Del.C. § 18-101, et seq. (the "LLC Act"), hereby declares the following to be the Second Amended and Restated Limited Liability Company Agreement (the "LLC Agreement") of the Company which amends and restates in its entirety the First Amended and Restated Limited Liability Company Agreement dated May 20, 2011 of the Company (the "Operating Agreement"). Capitalized terms not otherwise defined herein shall have the meanings set forth on Schedule A to this LLC Agreement.

Section 1. Formation of the Company. The Company has been formed as a limited liability company under the LLC Act by the filing of a Certificate of Formation with the Office of the Secretary of State of the State of Delaware. The LLC Member agrees to be bound by and comply with the provisions thereof and hereof.

Section 2. Name. The name of the Company is "Miami International Securities Exchange, LLC".

Section 3. Principal Place of Business. The location of the principal place of business of the Company shall be 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540, or such other place as determined by the Board of Directors from time to time.

Section 4. Registered Office; Registered Agent. The registered office of the Company required by the LLC Act to be maintained in the State of Delaware shall be 3422 Old Capitol Trail, Suite 700, Wilmington, DE 19808-6192, County of New Castle or such other office as the Board of Directors may designate from time to time. The registered agent for the Company shall be Delaware Business Incorporators, Inc., or such other registered agent as the Board of Directors may designate from time to time.

Section 5. Term. The Company shall continue until the Company is terminated in accordance with the provisions of this LLC Agreement.

Section 6. LLC Member. The mailing address of the LLC Member is set forth on Schedule B attached hereto. The LLC Member was admitted to the Company as an LLC Member of the Company upon its execution of a counterpart signature page to the Operating Agreement at which time it acquired 100% of the limited liability company interests of the Company.

Section 7. Purpose of the Company. The purpose of the Company shall be to conduct the operations of an "exchange" within the meaning of the Securities Exchange Act of

1934, as amended (the "Exchange Act"), and to conduct any lawful business or activity whatsoever, as permitted by applicable law and as determined from time to time by the board of directors of the Company (the "Board of Directors").

Section 8. Powers. The Company, and the Board of Directors and the Officers of the Company on behalf of the Company, (i) shall have and exercise all powers necessary, convenient or incidental to accomplish its purposes as set forth in Section 7 and (ii) shall have and exercise all of the powers and rights conferred upon limited liability companies formed pursuant to the LLC Act.

Section 9. Management.

(a) Board of Directors. The business and affairs of the Company shall be managed by or under the direction of a Board of Directors. Each Director is hereby designated as a "manager" within the meaning of the LLC Act. All Directors shall be elected by the LLC Member in the manner described in the By-Laws (as defined below). Each Director shall execute and deliver an instrument accepting such appointment and agreeing to be bound by all the terms and conditions of this LLC Agreement and the By-Laws. A Director need not be an LLC Member or an Exchange Member. The Directors as of the date of this LLC Agreement are set forth on Schedule C attached hereto.

(b) Powers. The Board of Directors shall have the power to do any and all acts necessary, convenient or incidental to or for the furtherance of the purposes described herein, including all powers, statutory or otherwise. The Board of Directors has the authority to bind the Company.

(c) By-Laws. The Company, the LLC Member and the Board of Directors hereby adopt the By-Laws of the Company in the form attached hereto as Exhibit A, as the same may be amended from time to time in accordance with the terms therein and in this LLC Agreement (the "By-Laws"). Each member of the Board of Directors, each Officer and the LLC Member shall be subject to the express provisions of this LLC Agreement and of the By-Laws. In case of any conflict between the provisions of this LLC Agreement and any provisions of the By-Laws, the provisions of this LLC Agreement shall control.

(d) Directors as Agents. To the extent of their powers set forth in this LLC Agreement, the Directors are agents of the Company for the purpose of the Company's business, and the actions of the Directors taken in accordance with such powers set forth in this LLC Agreement shall bind the Company. Notwithstanding the last sentence of Section 18-402 of the LLC Act, except as provided in this LLC Agreement, the By-Laws or in a resolution of the Directors, a Director may not bind the Company.

Section 10. Officers.

(a) Officers of the Company. Except as provided herein, the Board may, from time to time as it deems advisable, select natural persons who are employees or agents of the Company and designate them as officers of the Company (the "Officers") and assign titles

(including, without limitation, Chief Executive Officer, Vice President, Chief Financial Officer, Chief Regulatory Officer, Secretary and Treasurer) to any such person. The Board may appoint such other Officers and agents as it shall deem necessary or advisable who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board. The salaries of all Officers and agents of the Company shall be fixed by or in the manner prescribed by the By-Laws. The Officers of the Company shall hold office until their successors are chosen and qualified. Any Officer may be removed at any time, with or without cause, by the Board. Any vacancy occurring in any office of the Company shall be filled by the Board.

(b) Officers as Agents. The Officers, to the extent of their powers set forth in this LLC Agreement, the By-Laws or otherwise vested in them by action of the Board not inconsistent with this LLC Agreement, are agents of the Company for the purpose of the Company's business, and the actions of the Officers taken in accordance with such powers shall bind the Company.

(c) Duties of Board and Officers. Except to the extent otherwise modified herein, each Director and Officer shall have a fiduciary duty of loyalty and care similar to that of directors and officers of business corporations organized under the General Corporation Law of the State of Delaware.

Section 11. Advisory Board. The LLC Member may appoint any person or persons to act in an advisory capacity to the Company. Such a group shall be known as the Advisory Board.

Section 12. Limited Liability. Except as otherwise expressly provided by the LLC Act, the debts, obligations and liabilities of the Company, whether arising in contract, tort or otherwise (including, without limitation, those arising as member, owner or shareholder of another company, partnership or entity), shall be the debts, obligations and liabilities solely of the Company, and neither the LLC Member nor any Director or Officer shall be obligated personally for any such debt, obligation or liability of the Company solely by reason of being an LLC Member or Director or Officer of the Company.

Section 13. Capital Contributions. The LLC Member has contributed to the Company the amounts set forth in the books and records of the Company.

Section 14. Additional Contributions. The LLC Member is not required to make any additional capital contribution to the Company. However, the LLC Member may make additional capital contributions to the Company at any time upon the consent of such LLC Member. To the extent that the LLC Member makes an additional capital contribution to the Company, the LLC Member shall revise the books and records of the Company. The provisions of this LLC Agreement, including this Section 14, are intended to benefit the LLC Member and, to the fullest extent permitted by law, shall not be construed as conferring any benefit upon any creditor of the Company (and no such creditor of the Company shall be a third-party beneficiary of this LLC Agreement), and the LLC Member shall not have any duty or obligation to any

creditor of the Company to make any contribution to the Company or to issue any call for capital pursuant to this LLC Agreement.

Section 15. Allocation of Profits and Losses. The Company's profits and losses shall be allocated to the LLC Member.

Section 16. Distributions. Distributions shall be made to the LLC Member at the times and in the aggregate amounts determined by the Board. Notwithstanding any provision to the contrary contained in this LLC Agreement, (i) the Company shall not be required to make a distribution to the LLC Member on account of its interest in the Company if such distribution would violate the LLC Act or any other applicable law, and (ii) the Company shall not make a distribution to the LLC Member using Regulatory Funds.

Section 17. Books and Records.

(a) The Board shall keep or cause to be kept complete and accurate books of account and records with respect to the Company's business. The books and records of the Company shall at all times be maintained by the Board at a location within the United States. The LLC Member and its duly authorized representatives shall have the right to examine the Company books, records and documents during normal business hours. The Company, and the Board on behalf of the Company, shall not have the right to keep confidential from the LLC Member any information that the Board would otherwise be permitted to keep confidential from the LLC Member pursuant to Section 18-305(c) of the LLC Act. The Company's books of account shall be kept using the method of accounting determined by the LLC Member. The Company's independent auditor shall be an independent public accounting firm selected by the Board.

(b) All books and records of the Company reflecting confidential information pertaining to the self-regulatory function of the Company (including but not limited to disciplinary matters, trading data, trading practices, and audit information) shall be retained in confidence by the Company and its personnel and will not be used by the Company for any non-regulatory purposes and shall not be made available to any person (including, without limitation, any Exchange Member) other than to personnel of the Commission, and those personnel of the Company, members of committees of the Company, members of the Board, hearing officers and other agents of the Company to the extent necessary or appropriate to properly discharge the self-regulatory responsibilities of the Company.

Section 18. Reports. The Board shall, after the end of each fiscal year, use reasonable efforts to cause the Company's independent accountants to prepare and transmit to the LLC Member as promptly as possible any such tax information as may be reasonably necessary to enable the LLC Member to prepare its federal, state and local income tax returns relating to such fiscal year.

Section 19. Other Business. Unless otherwise restricted by law, the LLC Member, and any Officer, Director, employee or agent of the Company and any Affiliate of the LLC Member may engage in or possess an interest in other business ventures (unconnected with the

Company) of every kind and description, independently or with others. The Company shall not have any rights in or to such independent ventures or the income or profits therefrom by virtue of this LLC Agreement.

Section 20. Exculpation and Indemnification.

(a) Neither the LLC Member nor any Officer, Director, employee or agent of the Company nor any employee, representative, agent or affiliate of the LLC Member (collectively, the "Covered Persons") shall be liable to the Company or any other Person who is bound by this LLC Agreement for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this LLC Agreement, except that a Covered Person shall be liable for any such loss, damage or claim incurred by reason of such Covered Person's willful misconduct.

(b) To the fullest extent permitted by applicable law, a Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this LLC Agreement, except that no Covered Person shall be entitled to be indemnified in respect of any loss, damage or claim incurred by such Covered Person by reason of such Covered Person's willful misconduct with respect to such acts or omissions; provided, however, that any indemnity under this Section 20 by the Company shall be provided out of and to the extent of Company assets only, and the LLC Member shall not have personal liability on account thereof.

(c) To the fullest extent permitted by applicable law, expenses (including reasonable legal fees) incurred by a Covered Person defending any claim, demand, action, suit or proceeding shall, from time to time, be advanced by the Company prior to the final disposition of such claim, demand, action, suit or proceeding upon receipt by the Company of an undertaking by or on behalf of the Covered Person to repay such amount if it shall be determined that the Covered Person is not entitled to be indemnified as authorized in this Section 20.

(d) A Covered Person shall be fully protected in relying in good faith upon the records of the Company and upon such information, opinions, reports or statements presented to the Company by any Person as to matters the Covered Person reasonably believes are within such other Person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Company, including information, opinions, reports or statements as to the value and amount of the assets, liabilities or any other facts pertinent to the existence and amount of assets from which distributions to the LLC Member might properly be paid.

(e) To the extent that, at law or in equity, a Covered Person has duties (including fiduciary duties) and liabilities relating thereto to the Company or to any other Covered Person, a Covered Person acting under this LLC Agreement shall not be liable to the Company or to any other Covered Person who is bound by this LLC Agreement for its good faith

reliance on the provisions of this LLC Agreement or any approval or authorization granted by the Company or any other Covered Person.

(f) The foregoing provisions of this Section 20 shall survive any termination of this LLC Agreement and are in addition to any indemnification of Covered Persons provided by any agreement between the Company and a Covered Person, the By-Laws, by statute, or otherwise.

Section 21. Assignments. The LLC Member may assign, in whole or in part, its limited liability company interest in the Company (the "LLC Interest"); provided, however, such assignment 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 Exchange Act. The assignment of the LLC Interest shall entitle the assignee to exercise the rights of the LLC Member of the Company under this LLC Agreement and to enjoy all of the benefits of the LLC Interest.

Section 22. Dissolution.

(a) The Company shall be dissolved and its affairs shall be wound up upon the first to occur of the following: (i) the consent of the LLC Member and a majority of the whole Board, (ii) the termination of the legal existence of the LLC Member or the occurrence of any other event that terminates the continued membership of the LLC Member in the Company unless the Company is continued without dissolution in a manner permitted by this LLC Agreement or the LLC Act or (iii) the entry of a decree of judicial dissolution under Section 18-802 of the LLC Act.

(b) Notwithstanding any other provision of this LLC Agreement, the Bankruptcy of the LLC Member shall not cause the LLC Member to cease to be an LLC Member of the Company and upon the occurrence of such an event, the Company shall continue without dissolution.

(c) In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority, set forth in Section 18-804 of the LLC Act.

(d) The Company shall terminate when (i) all of the assets of the Company, after payment of or due provision for all debts, liabilities and obligations of the Company, shall have been distributed to the LLC Member in the manner provided for in this LLC Agreement and (ii) the Certificate of Formation shall have been canceled in the manner required by the LLC Act.

Section 23. Benefits of LLC Agreement - No Third-Party Rights. None of the provisions of this LLC Agreement shall be for the benefit of or enforceable by any creditor of the Company or by any creditor of the LLC Member. Nothing in this LLC Agreement shall be deemed to create any right in any Person (other than Covered Persons and to the extent provided

in Article II of the By-Laws, Exchange Members) not a party hereto, and this LLC Agreement shall not be construed in any respect to be a contract in whole or in part for the benefit of any third Person (other than the Covered Persons and to the extent provided in Article II of the By-Laws, Exchange Members).

Section 24. Severability of Provisions. Each provision of this LLC Agreement shall be considered severable and if for any reason any provision or provisions herein are determined to be invalid, unenforceable or illegal under any existing or future law, such invalidity, unenforceability or illegality shall not impair the operation of or affect those portions of this LLC Agreement which are valid, enforceable and legal.

Section 25. Entire LLC Agreement. This LLC Agreement constitutes the entire agreement of the parties with respect to the subject matter hereof.

Section 26. Binding Agreement. Notwithstanding any other provision of this LLC Agreement, the LLC Member agrees that this LLC Agreement constitutes a legal, valid and binding agreement of the LLC Member and is enforceable against the LLC Member, in accordance with its terms.

Section 27. Governing Law. This LLC Agreement shall be governed by and construed under the laws of the State of Delaware (without regard to conflict of laws principles), all rights and remedies being governed by said laws.

Section 28. Amendments.

(a) This LLC Agreement may be modified, altered, supplemented or amended by a resolution adopted by the Board and a written agreement executed and delivered by the LLC Member.

(b) Before any amendment to, or repeal of, any provision of this LLC Agreement shall be effective, those changes shall be submitted to the Board of Directors of the Company and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this LLC Agreement shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

Section 29. Notices. Any notices required to be delivered hereunder shall be in writing and personally delivered, mailed or sent by telecopy, electronic mail or other similar form of rapid transmission, and shall be deemed to have been duly given upon receipt (i) in the case of the Company, to the Company at its address in Section 3, (ii) in the case of the LLC Member, to the LLC Member at its address as listed on Schedule B attached hereto and (iii) in the case of either of the foregoing, at such other address as may be designated by written notice to the other party.

IN WITNESS WHEREOF, the undersigned, intending to be legally bound hereby, has duly executed this Second Amended and Restated Limited Liability Company Agreement as of the 1st day of December, 2012.

MEMBER:

MIAMI INTERNATIONAL HOLDINGS, INC.

By: _____
Thomas P. Gallagher
Chairman

SCHEDULE A

Definitions

A. Definitions

When used in this LLC Agreement, the following terms not otherwise defined herein have the following meanings:

An "affiliate" of, or person "affiliated" with a specific person, is a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified.

"Bankruptcy" means, with respect to any Person, if (A) such Person (i) makes an assignment for the benefit of creditors, (ii) files a voluntary petition in bankruptcy, (iii) is adjudged a bankrupt or insolvent, or has entered against it an order for relief, in any bankruptcy or insolvency proceedings, (iv) files a petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, liquidation or similar relief under any statute, law or regulation, (v) files an answer or other pleading admitting or failing to contest the material allegations of a petition filed against it in any proceeding of this nature, or (vi) seeks, consents to or acquiesces in the appointment of a trustee, receiver or liquidator of the Person or of all or any substantial part of its properties; or (B) (i) 120 days after the commencement of any proceeding against the Person seeking reorganization, arrangement, composition, readjustment, liquidation or similar relief under any statute, law or regulation, the proceeding has not been dismissed, or (ii) within 90 days after the appointment without such Person's consent or acquiescence of a trustee, receiver or liquidator of such Person or of all or any substantial part of its properties, the appointment is not vacated or stayed, or within 90 days after the expiration of any such stay, the appointment is not vacated. The foregoing definition of "Bankruptcy" is intended to replace and shall supersede and replace the definition of "Bankruptcy" set forth in Sections 18-101(1) and 18-304 of the LLC Act.

"Board" or "Board of Directors" means the Board of Directors of the Company.

"By-Laws" has the meaning set forth in Section 9(c).

"Certificate of Formation" means the Certificate of Formation of the Company filed with the Secretary of State of the State of Delaware on September 10, 2007 as amended or amended and restated from time to time.

"Commission" means the Securities and Exchange Commission.

"Company" means Miami International Securities Exchange, LLC, a Delaware limited liability company.

"Covered Persons" has the meaning set forth in Section 20.

"Directors" means the Persons elected or appointed to the Board of Directors from time to time in accordance with this LLC Agreement and the By-Laws, in their capacity as managers of the Company.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Exchange Member" means any registered broker or dealer that has been admitted to membership in the national securities exchange operated by the Company. An Exchange Member is not a member of the Company by reason of being an Exchange Member.

"LLC Act" has the meaning set forth in the preamble to this LLC Agreement.

"LLC Agreement" means this Limited Liability Company Agreement of the Company, together with the schedules attached hereto, as amended, restated, supplemented or otherwise modified from time to time.

"LLC Interest" has the meaning set forth in Section 21.

"LLC Member" means Miami International Holdings, Inc., as the sole member of the Company.

"Officer" means an officer of the Company described in Section 10.

"Operating Agreement" has the meaning set forth in the preamble to this LLC Agreement.

"Person" means any individual, corporation, partnership, joint venture, limited liability company, limited liability partnership, association, joint stock company, trust, unincorporated organization or other organization, whether or not a legal entity, and any governmental authority.

"Regulatory Funds" means fees, fines, or penalties derived from the regulatory operations of the Company. "Regulatory Funds" shall not be construed to include revenues derived from listing fees, market data revenues, transaction revenues, or any other aspect of the commercial operations of the Company, even if a portion of such revenues are used to pay costs associated with the regulatory operations of the Company.

B. Rules of Construction

Definitions in this LLC Agreement apply equally to both the singular and plural forms of the defined terms. The words "include" and "including" shall be deemed to be followed by the phrase "without limitation." The terms "herein," "hereof" and "hereunder" and other words of similar import refer to this LLC Agreement as a whole and not to any particular Section, paragraph or subdivision. The Section titles appear as a matter of convenience only and shall not affect the interpretation of this LLC Agreement. All Section, paragraph, clause, Exhibit or Schedule references not attributed to a particular document shall be references to such parts of this LLC Agreement.

SCHEDULE B

LLC Member

Name	Mailing Address	Limited Liability Company Interest
Miami International Holdings, Inc.	7 Roszel Road Princeton, NJ 08540	100%

SCHEDULE C

Directors as of December 1, 2012

	Name	Classification
1.	Thomas P. Gallagher	Industry
2.	Michael P. Ameen	Non-Industry
3.	Lindsay L. Burbage	Non-Industry/Independent
4.	Leslie Florio	Non-Industry/Independent
5.	Lawrence E. Jaffe	Non-Industry/Independent
6.	John E. McCormac	Non-Industry/Independent
7.	William J. O'Brien IV	Non-Industry
8.	Robert D. Prunetti	Non-Industry/Independent
9.	Cynthia Schwarzkopf	Non-Industry/Independent
10.	J. Gray Teekell	Non-Industry

EXHIBIT A

BY-LAWS OF MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

Attached

AMENDED AND RESTATED
BY-LAWS
OF
MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC
(a Delaware limited liability company)

These Amended and Restated By-Laws have been established as the By-Laws of Miami International Securities Exchange, LLC, a Delaware limited liability company (the "Company"), pursuant to the Second Amended and Restated Limited Liability Company Agreement of the Company, dated as of December 1, 2012 (as amended from time to time, the "LLC Agreement"), and, together with the LLC Agreement, constitute the limited liability company agreement of the Company within the meaning of the LLC Act (as defined in the LLC Agreement). In the event of any inconsistency between the LLC Agreement and these By-Laws, the provision of the LLC Agreement shall control.

ARTICLE I
Definitions

When used in these By-Laws, unless the context otherwise requires, the terms set forth below shall have the following meanings:

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

(b) An "affiliate" of, or person "affiliated" with a specific person, is a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified.

(c) "Board" or "Board of Directors" means the Board of Directors of the Company.

(d) "broker" shall have the same meaning as in Section 3(a)(4) of the Act.

(e) "Certificate of Formation" means the Certificate of Formation of the Company filed with the office of the Secretary of State of the State of Delaware on September 10, 2007 as amended or amended and restated from time to time.

(f) "Commission" means the Securities and Exchange Commission.

(g) "Company" means Miami International Securities Exchange, LLC, a Delaware limited liability company.

(h) "day" means calendar day.

(i) "dealer" shall have the same meaning as in Section 3(a)(5) of the Act.

(j) "Director" means the persons elected or appointed to the Board of Directors from time to time in accordance with the LLC Agreement and these By-Laws in their capacity as managers of the Company.

(k) "Effective Date" means the date of effectiveness of these Amended and Restated By-Laws.

(l) "ERP Agreement" means the agreement pursuant to which Units were issued.

(m) "ERP Director" means an Industry Director who has been nominated by an ERP Member and appointed to the Board of Directors.

(n) "ERP Member" means an Exchange Member who acquired Units pursuant to an ERP Agreement sufficient to acquire an ERP Director or an Observer position.

(o) "Exchange" means the national securities exchange operated by the Company.

(p) "Exchange Member" means any registered broker or dealer that has been admitted to membership in the national securities exchange operated by the Company. An Exchange Member is not a member of the Company by reason of being an Exchange Member. An Exchange Member will have the status of a "member" of the Exchange as that term is defined in Section 3(a)(3) of the Act.

(q) "Executive Representative" means the person identified to the Company by an Exchange Member as the individual authorized to represent, vote, and act on behalf of the Exchange Member. An Exchange Member may change its Executive Representative or appoint a substitute for its Executive Representative upon giving notice thereof to the Secretary of the Company via electronic process or such other process as the Company may prescribe. An Executive Representative of an Exchange Member or a substitute shall be a member of senior management of the Exchange Member.

(r) "Independent Director" means a Director who has no material relationship with the Company or any affiliate of the Company, or any Exchange Member or any affiliate of any such Exchange Member; *provided*, however, that an individual who otherwise qualifies as an Independent Director shall not be disqualified from serving in such capacity solely because such Director is a Director of the Company or its LLC Member.

(s) "Independent member" means a member of any committee who has no material relationship with the Company or any affiliate of the Company, or any Exchange Member or any affiliate of any such Exchange Member, other than as a committee member. The term Independent member may but is not required to refer to an Independent Director who serves on a committee.

(t) "Industry Director" means a Director who (i) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (ii) is an officer,

director (excluding an outside director), or employee of an entity that owns more than 10% of the equity of a broker or dealer, and the broker or dealer accounts for more than 5% of the gross revenues received by the consolidated entity; (iii) owns more than 5% of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed 10% of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (iv) provides professional services to brokers or dealers, and such services constitute 20% or more of the professional revenues received by the Director or 20% or more of the gross revenues received by the Director's firm or partnership; (v) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50% or more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20% or more of the professional revenues received by the Director or member or 20% or more of the gross revenues received by the Director's or member's firm or partnership; or (vi) has a consulting or employment relationship with or provides professional services to the Company or any affiliate thereof or has had any such relationship or provided any such services at any time within the prior three years.

(u) "Industry member" means a member of any committee or hearing panel who (i) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (ii) is an officer, director (excluding an outside director), or employee of an entity that owns more than 10% of the equity of a broker or dealer, and the broker or dealer accounts for more than 5% of the gross revenues received by the consolidated entity; (iii) owns more than 5% of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed 10% of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (iv) provides professional services to brokers or dealers, and such services constitute 20% or more of the professional revenues received by the Director or 20% or more of the gross revenues received by the Director's firm or partnership; (v) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50% or more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20% or more of the professional revenues received by the Director or member or 20% or more of the gross revenues received by the Director's or member's firm or partnership; or (vi) has a consulting or employment relationship with or provides professional services to the Company or any affiliate thereof or has had any such relationship or provided any such services at any time within the prior three years.

(v) "List of Candidates" means the list of nominees for Member Representative Director positions as nominated by the Member Nominating Committee and amended by petitions filed by Exchange Members. The List of Candidates is submitted to Exchange Members for the final selection of nominees to be elected by the LLC Member to serve as Member Representative Directors.

(w) "LLC Act" means the Delaware Limited Liability Company Act, 6 §18-101, et seq.

(x) "LLC Member" means any person who maintains a direct ownership interest in the Company. The sole LLC Member of the Company shall be Miami International Holdings, Inc.

(y) "Measurement Period" means the time period over which Units are vested.

(z) "Member Nominating Committee" means the Member Nominating Committee elected pursuant to these By-Laws.

(aa) "Member Representative Director" means a Director who has been elected by the LLC Member after having been nominated by the Member Nominating Committee or by an Exchange Member pursuant to these By-Laws and confirmed as the nominee of Exchange Members after majority vote of Exchange Members, if applicable. A Member Representative Director may, but is not required to be an officer, director, employee, or agent of an Exchange Member.

(bb) "Member Representative member" means a member of any committee or hearing panel appointed by the Board who has been elected or appointed after having been nominated by the Member Nominating Committee pursuant to these By-Laws and who is an officer, director, employee, or agent of an Exchange Member.

(cc) "Nominating Committee" means the Nominating Committee elected pursuant to these By-Laws.

(dd) "Non-Industry Director" means a Director who is (i) an Independent Director; or (ii) any other individual who would not be an Industry Director.

(ee) "Non-Industry member" means a member of any committee who is (i) an Independent member; or (ii) any other individual who would not be an Industry member.

(ff) "Observer" has the meaning set forth in Article II, Section 2.2 of these By-Laws.

(gg) "Performance Criteria" means the trades on MIAX in an amount equal to a percentage of the average daily volume of contracts traded on all options exchanges for all option classes listed on MIAX as reported to The Options Clearing Corporation for a specified Measurement Period in an amount such that the ERP Member earns Units during such specified Measurement Period.

(hh) "person" shall mean a natural person, partnership, corporation, limited liability company, entity, government, or political subdivision, agency or instrumentality of a government.

(ii) "person associated with an Exchange Member" or "associated person of an Exchange Member" means any partner, officer, or director of an Exchange Member (or person occupying a similar status or performing similar functions), any person directly or indirectly

controlling, controlled by, or under common control with such Exchange Member, or any employee of such Exchange Member.

(jj) "Record Date" means a date at least thirty-five (35) days before the date announced as the date for the annual meeting of the LLC Member and set as the last date on which Exchange Members may petition to add to the List of Candidates and used to determine whether Exchange Members are entitled to vote on the final List of Candidates.

(kk) "registered broker or dealer" means any registered broker or dealer, as defined in Section 3(a)(48) of the Act, that is registered with the Commission under the Act.

(ll) "Regulatory Funds" means fees, fines, or penalties derived from the regulatory operations of the Company. "Regulatory Funds" shall not be construed to include revenues derived from listing fees, market data revenues, transaction revenues, or any other aspect of the commercial operations of the Company, even if a portion of such revenues are used to pay costs associated with the regulatory operations of the Company.

(mm) "Rules" or "Exchange Rules" shall have the same meaning as set forth in Section 3(a)(27) of the Act.

(nn) "statutory disqualification" shall have the same meaning as in Section 3(a)(39) of the Act.

(oo) "Unit" means a combination of securities or types of securities packaged together as one.

ARTICLE II
Board of Directors

Section 2.1 Powers

(a) The business and affairs of the Company shall be managed by its Board, except to the extent that the authority, powers and duties of such management shall be delegated to a committee or committees of the Board pursuant to these By-Laws or the Rules. The Board of Directors shall have the power to do any and all acts necessary, convenient or incidental to or for the furtherance of the purposes described herein, including all powers, statutory or otherwise. To the fullest extent permitted by applicable law and these By-Laws, the Board may delegate any of its powers to a committee appointed pursuant to Article IV or to any officer, employee or agent of the Company.

(b) The Board shall have the power to adopt, amend or repeal the Rules in accordance with Article IX, Section 9.1.

(c) The Board may adopt such rules, regulations, and requirements for the conduct of the business and management of the Company, not inconsistent with law, the Certificate of Formation, the LLC Agreement or these By-Laws, as the Board may deem proper.

A Director shall, in the performance of such Director's duties, be fully protected, to the fullest extent permitted by law, in relying in good faith upon the books of account or reports made to the Company by any of its officers, by an independent certified public accountant, by an appraiser selected with reasonable care by the Board or any committee of the Board or by any agent of the Company, or in relying in good faith upon other records of the Company.

(d) In connection with managing the business and affairs of the Company, the Board shall consider applicable requirements for registration as a national securities exchange under Section 6(b) of the Act, including, without limitation, the requirements that (i) the Rules shall be designed to protect investors and the public interest and (ii) the Company shall be so organized and have the capacity to carry out the purposes of the Act and to enforce compliance by its "members," as that term is defined in Section 3 of the Act (such statutory members being referred to in these By-Laws as "Exchange Members") and persons associated with Exchange Members, with the provisions of the Act, the rules and regulations under the Act, and the Rules of the Exchange. In furtherance of the foregoing, the Board shall, among other things, approve the Exchange's budget which shall be adequate for the operation of the Exchange and for the Exchange to carry out its responsibilities under the Act. In connection therewith, the Board shall approve the Exchange's regulatory budget which shall be adequate for the regulation of the Exchange.

(e) In light of the unique nature of the Company and its operations and in light of the Company's status as a self-regulatory organization, the Board, when evaluating any proposal, shall, to the fullest extent permitted by applicable law, take into account all factors that the Board deems relevant, including, without limitation, to the extent deemed relevant: (i) the potential impact thereof on the integrity, continuity and stability of the national securities exchange operated by the Company and the other operations of the Company, on the ability to prevent fraudulent and manipulative acts and practices and on investors and the public, and (ii) whether such would promote just and equitable principles of trade, foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to and facilitating transactions in securities or assist in the removal of impediments to or perfection of the mechanisms for a free and open market and a national market system.

Section 2.2 Composition of the Board and Observer Rights

(a) The number of Directors shall be not less than ten (10) including the Chief Executive Officer of the Company. The number of Directors may be fixed from time to time by the LLC Member at any time in its sole and absolute discretion, upon notice to all Directors subject to the minimum number provided for in this Section 2.2(a). No decrease in the number of Directors shall have the effect of shortening the term of any incumbent Director.

(b) At all times the Board of Directors shall consist of one (1) Director who is the Chief Executive Officer of the Company and sufficient numbers of Non-Industry (including Independent), Industry and Member Representative Directors to meet the following composition requirements:

(i) The number of Non-Industry Directors, including at least one Independent Director, shall equal or exceed the sum of the number of Industry Directors (including the ERP Directors) and Member Representative Directors elected pursuant to Article II, or Section 2.4; and

(ii) The number of Member Representative Directors (which shall not include the ERP Directors) shall be at least twenty (20) percent of the Board.

(c) The Secretary shall collect from each nominee for Director such information as is reasonably necessary to serve as the basis for a determination of the nominee's classification as a Member Representative, Non-Industry or Independent Director, if applicable, and the Secretary shall certify to the Nominating Committee or Member Nominating Committee each nominee's classification, if applicable. Directors shall update the information submitted under this subsection at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information.

(d) A Director may not be subject to a statutory disqualification.

(e) Any ERP Member (either by itself or with its affiliates) that is not otherwise represented on the Board may have the right to nominate one (1) ERP Director or appoint an Observer to the Board of Directors. If at any time such ERP Member is otherwise able to nominate an ERP Director hereunder but is unable to fill such position as a result of such ERP Member already having a representative on the Board, such ERP Member will have the right to nominate such Director in accordance with this Article II, Section 2.2(e) upon the resignation or removal of such Director already serving on the Board. The ERP Member's right to nominate a Director or appoint an Observer pursuant to this Section 2.2(e) shall be perpetual, subject to the provisions of Section 2.3 below. The nominee shall be appointed at the first annual meeting of the Company following the Effective Date.

(f) If an ERP Director position needs to be added pursuant to Article II, Section 2.2(e), such ERP Director shall be nominated by the applicable ERP Member and elected by the LLC Member and additional Director positions shall be added and filled at the same time as the election of the new ERP Director, as required to comply with the requirements set forth in Article II, Section 2.2(a) and (b).

(g) As per Section 2.2(e), a person may be invited to attend meetings of the Board in a nonvoting observer capacity as follows ("Observers"):

(i) Any ERP Member that is not otherwise represented on the Board shall have the right to appoint one individual as an Observer. If the ERP Member is otherwise able to nominate an ERP Director, an Observer appointment would be in lieu of such ERP Director nomination.

(ii) The ERP Member's right to appoint an Observer pursuant to this Section 2.2(g) shall be perpetual, subject to the provisions of Section 2.3 below. An Observer may not be subject to a statutory disqualification.

(iii) The Company shall invite the Observers to attend all meetings of its Board of Directors in a nonvoting observer capacity and, in this respect, shall give such representative copies of all notices, minutes, consents, and other materials that it provides to its Directors at the same time and in the same manner as provided to such Directors; provided, however, that such representative shall agree to hold in confidence and trust and to act in a fiduciary manner with respect to all information so provided; and provided further, that the Company reserves the right to withhold any information and to exclude such representative from any meeting or portion thereof if access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel or result in disclosure of trade secrets or a conflict of interest.

Section 2.3 Terms of Office

(a) The Board term of the Chief Executive Officer shall expire when such individual ceases to be Chief Executive Officer of the Company.

(b) Each of the Non-Industry and Industry Directors (including Member Representative Directors) other than the ERP Directors shall be divided into three (3) classes, designated Class I, Class II and Class III, which shall be as nearly equal in number and classification as the total number of such Directors then serving on the Board permits. Directors other than the Chief Executive Officer or the ERP Directors shall serve staggered three-year terms, with the term of office of one class expiring each year. A Director may serve for any number of terms, consecutive or otherwise. In order to commence such staggered three-year terms, Directors in Class I shall hold office until the second annual election of the Board of Directors, Directors in Class II shall initially hold office until the third annual election of the Board of Directors, and Directors in Class III shall initially hold office until the fourth annual election of the Board of Directors. Commencing with the second annual election of the Board of Directors, the term of office for each class of Directors elected at such time shall be three years from the date of their election. Notwithstanding the foregoing, in the case of any new Director as contemplated by Article II, Section 2.2(a), such Director shall be added to a class, as determined by the Board at the time of such Director's initial election or appointment, and shall have an initial term expiring at the same time as the term of the class to which such Director has been added. The Board term of the ERP Directors shall expire as set forth in Article II, Section 2.3 (c), (d) and (e) below.

(c) In the event that an ERP Member (either by itself or with its affiliates) who has the right to nominate an ERP Director and which fails to meet its Performance Criteria for three consecutive Measurement Periods such that it only meets the required performance criteria of an ERP Member that may appoint an Observer, the individual designated by the non-performing ERP Member shall immediately cease to be an ERP Director of the Company and such ERP Member shall cease to have the right to nominate an ERP Director. Such non-performing ERP Member shall continue to maintain Observer rights as set forth in Article II, Section 2.2(g), subject to the provisions of Section 2.3(e) below. Notwithstanding the foregoing, in the event that the non-performing ERP Member satisfies the Performance Criteria for a subsequent Measurement Period, then such ERP Member may renominate an ERP Director for election at the immediately following annual meeting of the Company.

(d) In the event that an ERP Member (either by itself or with its affiliates) who has the right to appoint an Observer and which fails to meet its Performance Criteria for three consecutive Measurement Periods, the individual designated by the non-performing ERP Member shall immediately cease to be an Observer and such non-performing ERP Member shall cease to have the right to appoint an Observer. Notwithstanding the foregoing, in the event that the non-performing ERP Member satisfies the Performance Criteria for a subsequent Measurement Period, then such ERP Member may reappoint an Observer.

(e) An individual ERP Director or Observer position shall be immediately terminated following the transfer of common stock or warrants of the LLC Member acquired pursuant to the ERP Agreement by an ERP Member which, after giving effect to such transfer, results in such ERP Member holding less than 20% of the aggregate number of shares of common stock of the LLC Member issued or issuable pursuant to the Units acquired pursuant to the ERP Agreement collectively.

Section 2.4 Nomination and Election

(a) The Nominating Committee each year shall nominate Directors for each Director position standing for election at the annual meeting of the LLC Member that year. For positions requiring persons who qualify as Member Representative Directors, the Nominating Committee shall nominate only those persons whose names have been approved and submitted by the Member Nominating Committee, and approved by, if applicable, Exchange Members pursuant to the procedures set forth below in this Section 2.4. For Director positions requiring persons who qualify as ERP Directors, the Nominating Committee shall nominate only those persons whose names have been approved and submitted by the applicable ERP Members having the right to nominate such person pursuant to Article II, Section 2.2 of these By-Laws.

(b) The Member Nominating Committee shall consult with the Nominating Committee, the Chairman and Chief Executive Officer, and shall solicit comments from Exchange Members for the purpose of approving and submitting names of candidates for election to the position of Member Representative Director. A Member Representative Director may, but is not required to be an officer, director, employee, or agent of an Exchange Member.

(c) Not later than sixty (60) days prior to the date announced as the date for the annual meeting of the LLC Member, the Member Nominating Committee shall report to the Nominating Committee and the Secretary the initial nominees for Member Representative Director positions on the Board that have been approved and submitted by the Member Nominating Committee. The Secretary shall promptly notify Exchange Members of those initial nominees. Exchange Members may identify other candidates ("Petition Candidates" for purposes of this Section 2.4) for the Member Representative Director positions by delivering to the Secretary, at least thirty-five (35) days before the date announced as the date for the annual meeting of the LLC Member (the "Record Date" for purposes of this Section 2.4), a written petition, which shall designate the candidate by name and office and shall be signed by Executive Representatives of ten percent (10%) or more of the Exchange Members. An Exchange Member may endorse as many candidates as there are Member Representative

Director positions to be filled. No Exchange Member, together with its affiliates, may account for more than fifty percent (50%) of the signatures endorsing a particular candidate, and any signatures of such Exchange Member, together with its affiliates, in excess of the fifty percent (50%) limitation shall be disregarded.

(d) Each petition for a Petition Candidate must include a completed questionnaire used to gather information concerning Member Representative Director candidates and must be filed with the Company (the Company shall provide the form of questionnaire upon the request of any Exchange Member).

(e) If no valid petitions from Exchange Members are received by the Record Date, the initial nominees approved and submitted by the Member Nominating Committee shall be nominated as Member Representative Directors by the Nominating Committee. If one or more valid petitions from Exchange Members are received by the Record Date, the Secretary shall include such additional nominees, along with the initial nominees nominated by the Member Nominating Committee, on a list of nominees (the "List of Candidates"). Upon completion, the List of Candidates shall be sent by the Secretary to all Exchange Members that were Exchange Members on the Record Date, by any means, including electronic transmission, to confirm the nominees for the Member Representative Director positions. The List of Candidates shall be accompanied by a notice regarding the time and date of an election to be held at least twenty (20) days prior to the annual LLC Member meeting to confirm the Exchange Members' selections of nominees for Member Representative Directors.

(f) With respect to the election held to determine the final nomination of Member Representative Directors, each Exchange Member shall have the right to cast one (1) vote for each available Member Representative Director nomination; provided, however, that any such vote must be cast for a person on the List of Candidates and that no Exchange Member, together with its affiliates, may account for more than twenty percent (20%) of the votes cast for a candidate, and any votes cast by such Exchange Member, together with its affiliates, in excess of such twenty percent (20%) limitation shall be disregarded. The votes shall be cast by written ballot, electronic transmission or any other means as set forth in a notice to the Exchange Members sent by the Company prior to such election. Only votes received prior to 5:00 p.m. Eastern Time on the date of the election shall count for the nomination of a Member Representative Director. The persons on the List of Candidates who receive the most votes shall be selected as the nominees for the Member Representative Director positions to be elected by the LLC Member. Tie votes by the Exchange Members shall be decided by the Member Nominating Committee.

Section 2.5 [Reserved]

Section 2.6 Chairman of the Board

The Board shall appoint one of the Directors to serve as the Chairman of the Board ("Chairman"). The Chairman shall preside at all meetings of the Board at which the Chairman is present; provided, however, that if the Chairman is the Chief Executive Officer he or she shall not participate in executive sessions of the Board. The Chairman shall exercise such other

powers and perform such other duties as may be assigned to the Chairman from time to time by the Board. If the Chairman is the Chief Executive Officer, the Board of Directors shall designate a Lead Director from among the Board's Independent Directors to preside over executive sessions of the Board. The Board shall publicly disclose the identity of the Lead Director, if any, and the means by which interested parties may communicate with such Lead Director.

Section 2.7 Vice Chairman

Each year following the annual election of the Directors, the Board may select a Vice Chairman of the Board (the "Vice Chairman") to serve for a term of one year and until a successor is elected or appointed and qualified. The Vice Chairman shall (i) preside over the meetings of the Board in the event the Chairman of the Board is absent or unable to do so, and (ii) exercise such other powers and perform such other duties as are delegated to the Vice Chairman of the Board by the Board.

Section 2.8 Vacancies

(a) Whenever any Director position becomes vacant prior to the election of a successor at the end of such Director's term, whether because of death, disability, disqualification, removal, or resignation, the Nominating Committee shall nominate, and the LLC Member shall elect, a person satisfying the classification (Industry, Non-Industry, or Independent Director), if applicable, for the directorship as provided in Article II, Section 2.2(b) to fill such vacancy; *provided*, however, that if the remaining term of office of a Member Representative Director at the time of such Director's termination is not more than six months, during the period of vacancy the Board shall not be deemed to be in violation of Article II, Section 2.2(b) by virtue of such vacancy.

(b) If the LLC Member fills a vacancy resulting from a Member Representative Director position becoming vacant prior to the expiration of such Member Representative Director's term, or resulting from the creation of an additional Member Representative Director position required by an increase in the size of the Board, then the LLC Member shall follow the procedures set forth in this Section 2.8(b). In such an event, the Member Nominating Committee shall either (i) recommend an individual to the LLC Member to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the LLC Member from which the LLC Member shall elect the individual to fill such vacancy. The LLC Member shall elect, pursuant to this Section 2.8(b), only individuals recommended by the Member Nominating Committee.

(c) If an ERP Director position becomes vacant for a reason other than failure by an ERP Member to meet its Performance Criteria as set forth in Article II, Section 2.3(c), then the LLC Member shall follow the procedures set forth in this Section 2.8(c). In such an event, the Nominating Committee shall recommend an individual to the LLC Member to be elected to fill such vacancy that has been nominated by the applicable ERP Member having the right to nominate such person pursuant to Article II, Section 2.2 of these By-Laws. The LLC Member shall elect, pursuant to this Section 2.8(c), only individuals recommended by the Nominating Committee.

Section 2.9 Removal and Resignation

(a) Except as hereinafter provided, any Director may be removed or expelled with or without cause by the LLC Member, and may be removed by the Board of Directors in the manner provided by Article II, Section 2.9(b) below; provided, however, that any Member Representative Director or ERP Director may only be removed for cause, which shall include, without limitation, such Director being subject to a statutory disqualification.

(b) A Director shall be removed immediately upon a determination by the Board, by a majority vote of the remaining Directors: (i) that the Director no longer satisfies the classification for which the Director was elected; and (ii) that the Director's continued service as such would violate the compositional requirements of the Board set forth in Article II, Section 2.2(b).

(c) Any Director may resign at any time either upon notice of resignation to the Chairman of the Board, the President or the Secretary. Any such resignation shall take effect at the time specified therein or, if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

Section 2.10 Place of Meetings; Mode

Any meeting of the Board may be held at such place, within or without the State of Delaware, as shall be designated in the notice of such meeting, but if no such designation is made, then the meeting will be held at the principal business office of the Company. Members of the Board or any committee of the Board may participate in a meeting of the Board or 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 the meeting.

Section 2.11 Regular Meetings

Regular meetings of the Board may be held, with or without notice, at such time or place as may from time to time be specified in a resolution adopted by the Board.

Section 2.12 Special Meetings

(a) Special meetings of the Board may be called on a minimum of two (2) days' notice to each Director by the Chairman, the Chief Executive Officer or the President, and shall be called by the Secretary upon the written request of three (3) Directors then in office.

(b) The person or persons calling a special meeting of the Board shall fix the time and place at which the meeting shall be held, and such time and place shall be specified in the notice of such meeting. Notice of any special meeting shall be given to each Director at his or her business address or such other address as he or she may have advised the Secretary to use for

such purpose. If delivered, notice shall be deemed to be given when delivered to such address or to the Director to be notified. If mailed, such notice shall be deemed to be given five (5) business days after deposit in the United States mail, postage prepaid, of a letter addressed to the appropriate location. Notice may also be given by telephone, electronic transmission or other means not specified in this section, and in each such case shall be deemed to be given when actually received by the Director to be notified.

Section 2.13 Exchange Member Meetings

The Company shall not be required to hold meetings of the Exchange Members.

Section 2.14 Voting, Quorum and Action by the Board

Each Director shall be entitled to one (1) vote. At all meetings of the Board, the presence of a majority of the number of Directors then in office shall constitute a quorum for the transaction of business. If a quorum shall not be present at any meeting of the Board, the Directors present at such meeting may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. The act of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board except as may be otherwise specifically provided by statute, the Certificate of Formation, the LLC Agreement or these By-Laws.

Section 2.15 Presumption of Assent

A Director of the Company who is present at a duly convened meeting of the Board or of a committee of the Board at which action on any corporate matter is taken shall be conclusively presumed to have assented to the action taken unless his or her dissent or election to abstain shall be entered in the minutes of the meeting or unless he or she shall file his or her written dissent or election to abstain to such action with the person acting as the secretary of the meeting before the adjournment of the meeting or shall forward such dissent or election to abstain by registered or certified mail to the Secretary of the Company immediately after the adjournment of the meeting. Such right to dissent or abstain shall not apply to a Director who voted in favor of such action.

Section 2.16 Action in Lieu of Meeting

Unless otherwise restricted by statute, the Certificate of Formation, the LLC Agreement or these By-Laws, any action required or permitted to be taken at any meeting of the Board or any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing(s) or electronic transmission(s) are filed with the minutes of proceedings of the Board or the committee.

Section 2.17 Waiver of Notice

(a) Whenever notice is required to be given by law, the Certificate of Formation, the LLC Agreement or these By-Laws, a waiver thereof by the person or persons

entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board, or members of a committee, need be specified in any waiver of notice.

(b) Attendance of a person at a meeting 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 because the meeting is not lawfully called or convened.

Section 2.18 Compensation of Board and Committee Members

The Board may provide for reasonable compensation of the Chairman, the Directors and the members of committees. The Board may also provide for reimbursement of reasonable expenses incurred by such persons in connection with the business of the Company.

Section 2.19 Interpretation of By-Laws

The Board shall have the power to interpret these By-Laws and any interpretation made by it shall be final and conclusive.

Section 2.20 Conflicts of Interest; Contracts and Transactions Involving Directors

(a) A Director or a member of any committee may not participate in the consideration or decision of any matter relating to a particular Exchange Member, company, or individual if such Director or committee member has a material interest in, or a professional, business, or personal relationship with, that Exchange Member, company, or individual, or if such participation shall create an appearance of impropriety. In any such case, the Director or committee member shall recuse himself or herself or shall be disqualified. If a member of the Board or any committee is recused from consideration of a matter, any decision on the matter shall be by a vote of a majority of the remaining members of the Board or applicable committee.

(b) No contract or transaction between the Company and one or more of its Directors or officers, or between the Company and any other corporation, partnership, association, or other organization in which one or more of its Directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason if: (i) the material facts pertaining to such Director's or officer's relationship or interest and 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 vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum; or (ii) the material facts are disclosed or become known to the Board or committee after the contract or transaction is entered into, and the Board or committee in good faith ratifies the contract or transaction by the affirmative vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum.

ARTICLE III
The LLC Member

Section 3.1 Annual Meeting; Election of Directors and Other Matters

The annual meeting of the LLC Member shall be held at such place and time as determined by the Board for the purpose of electing Directors and members of the Nominating Committee and Member Nominating Committee, and for conducting such other business as may properly come before the meeting. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to the LLC Member not less than ten (10) nor more than sixty (60) days before the date of the meeting.

Section 3.2 Special Meetings

Special meetings of the LLC Member, for any purpose or purposes, may be called by the Chairman, the Board, the Chief Executive Officer or the President, and shall be called by the Secretary at the request in writing of the LLC Member. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given to the LLC Member not less than ten (10) nor more than sixty (60) days before the date of the meeting. Business transacted at any special meeting of the LLC Member shall be limited to the purpose(s) stated in the notice of the meeting.

Section 3.3 Action in Lieu of Meeting

Any action upon which a vote of the LLC Member 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 LLC Member.

Section 3.4 Assignment

The LLC Member may not transfer or assign in whole or in part its limited liability company interest in the Company to any entity, unless such transfer or assignment shall be filed with and approved by the Commission under Section 19 of the Exchange Act and the rules promulgated thereunder.

ARTICLE IV
Committees

Section 4.1 Designation of Committees

(a) **Committees of the Board.** The committees of the Board shall consist of a Compensation Committee, an Audit Committee, a Regulatory Oversight Committee, an Appeals Committee, and such other committees as may be provided in these By-Laws or the Rules or as may be from time to time established by the Board. Committees shall have such authority as is vested in them by these By-Laws or the Rules, or as is delegated to them by the Board. All committees are subject to the control and supervision of the Board.

(b) **Committees of the Exchange.** The Exchange also shall have such other committees as may be provided in these By-Laws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these By-Laws, the Rules or the resolution of the Board establishing any such other committee, the Chairman 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 thereof. Except as may be otherwise provided in these By-Laws or the Rules, the Chairman or his or her designee may, at any time, with or without cause, remove any member of any such Exchange committee.

Section 4.2 Board Committees - Appointment and Removal; Vacancies; Term

(a) Except as may be otherwise provided in these By-Laws, the Rules or the resolution of the Board establishing any committee, the Chairman, with the approval of the Board, shall appoint, consistent with these By-Laws, the members of all committees of the Board, and the Chairman may, at any time, with or without cause, remove any member of a committee so appointed, with the approval of the Board. Each committee shall be comprised of at least three (3) people and except as provided in these By-Laws may include persons who are not members of the Board; provided, however, that such committee members who are not also members of the Board shall only participate in committee actions to the extent permitted by law. In appointing members to committees of the Board, the Chairman is responsible for determining that any such committee meets the composition requirements set forth in this Article IV.

(b) Upon request of the Secretary, each prospective committee member who is not a Director shall provide to the Secretary such information as is reasonably necessary to serve as the basis for a determination of the prospective committee member's classification as an Industry, Non-Industry, or Independent member. The Secretary shall certify to the Board each prospective committee member's classification. Such committee members shall update the information submitted under this subsection at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information. A committee member may not be subject to a statutory disqualification.

(c) The term of office of a committee member shall terminate immediately upon a determination by the Board, by a majority vote of the Directors, (i) that the committee member no longer satisfies the classification for which the committee member was selected; and (ii) that the committee member's continued service as such would violate the compositional requirements of such committee set forth in this Article IV.

(d) Any vacancy occurring in a committee shall be filled by the Chairman for the remainder of the term, with the approval of the Board.

(e) Except as otherwise provided by the By-Laws, members of a committee shall hold office for a one-year period.

Section 4.3 Conduct of Proceedings

Except as otherwise provided in these By-Laws, the Rules, the Charter of the committee or by the Board by resolution, each committee may adopt its own rules of procedure and may meet at stated times or on such notice as such committee may determine. 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 II of these By-Laws. Each committee shall keep regular minutes of its meetings and report the same to the Board when required.

Section 4.4 Voting, Quorum and Action by Committees

Each committee member shall be entitled to one (1) vote. Unless otherwise required by the By-Laws, the Rules or the Charter of the committee, the presence of a majority of the number of committee members serving on a committee shall constitute a quorum for the transaction of business of such committee. If a quorum shall not be present at any meeting of a committee, the committee members present at such meeting may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. The act of a majority of the committee members present at any meeting at which there is a quorum shall be the act of such committee except as may be otherwise specifically provided by statute or these By-Laws, the Rules or the Charter of the committee.

Section 4.5 Specified Board Committees

(a) **Compensation Committee.** The Chairman, with the approval of the Board, shall appoint a Compensation Committee consisting of Non-Industry Directors. The Compensation Committee shall consider and recommend compensation policies, programs, and practices for officers and other employees of the Company.

(b) **Audit Committee.** The Chairman, with the approval of the Board, shall appoint an Audit Committee consisting of Directors. A majority of the Audit Committee members shall be Non-Industry Directors. A Non-Industry Director shall serve as Chairman of the Audit Committee. The Audit Committee shall perform the following primary functions, as well as such other functions as may be specified in the charter of the Audit Committee: (i) provide oversight over the Company's financial reporting process and the financial information that is provided to the LLC Member and others; (ii) provide oversight over the systems of internal controls established by management and the Board and the Company's legal and compliance process; and (iii) direct and oversee all the activities of the Company's internal audit function, including but not limited to management's responsiveness to internal audit recommendations. The Audit Committee shall have exclusive authority to: (i) hire or terminate the head of the Company's Internal Audit Department; (ii) determine the compensation of the head of the Internal Audit Department; and (iii) determine the budget for the Internal Audit Department. The Internal Audit Department and its head shall report directly to the Audit Committee. The Audit Committee may, in its discretion, direct that the Internal Audit Department also report to senior management of the Company on matters the Audit Committee deems appropriate and may request that senior management of the Company perform such

operational oversight as necessary and proper, consistent with preservation of the independence of the internal audit function.

(c) **Regulatory Oversight Committee**. The Chairman, with the approval of the Board, shall appoint a Regulatory Oversight Committee consisting of Non-Industry Directors. The Regulatory Oversight Committee shall oversee the adequacy and effectiveness of Exchange's regulatory and self-regulatory organization responsibilities, and shall be responsible for assessing the Exchange's regulatory performance and recommending compensation and personnel actions involving the Chief Regulatory Officer and senior regulatory personnel to the Board's Compensation Committee for action. The Regulatory Oversight Committee shall also assist the Board and committees of the Board in reviewing the regulatory plan and the overall effectiveness of Exchange's regulatory functions. In furtherance of its functions, the Regulatory Oversight Committee (i) shall review the Exchange's regulatory budget, which shall be approved by the Board of Directors, and shall specifically inquire into the adequacy of resources available in the budget for regulatory activities; and (ii) shall meet regularly with the Chief Regulatory Officer in executive session.

(d) **Appeals Committee**. The Chairman, with the approval of the Board, shall appoint an Appeals Committee. The Appeals Committee shall preside over all appeals related to disciplinary and adverse action determinations in accordance with the Exchange Rules. The Appeals Committee shall consist of one Independent Director, one Industry Director, and one Member Representative Director. If the Independent Director recuses himself or herself from an appeal, due to a conflict of interest or otherwise, such Independent Director may be replaced by a Non-Industry Director for purposes of the applicable appeal if there is no other Independent Director able to serve as the replacement.

(e) **Executive Committee**. The Chairman, with the approval of the Board, may appoint an Executive Committee consisting of Directors, which shall, to the fullest extent permitted by Delaware law and other applicable law, have and be permitted to exercise all the powers and authority of the Board in the management of the business and affairs of the Company between meetings of the Board. The number of Non-Industry Directors on the Executive Committee shall equal or exceed the number of Industry Directors on the Executive Committee. The percentage of Independent Directors on the Executive Committee shall be at least as great as the percentage of Independent Directors on the whole Board, and the percentage of Member Representative Directors on the Executive Committee shall be at least as great as the percentage of Member Representative Directors on the whole Board.

(f) **Finance Committee**. The Chairman, with the approval of the Board, may appoint a Finance Committee consisting of Directors. A majority of the Finance Committee members shall be Non–Industry Directors. The Finance Committee shall advise the Board with respect to the oversight of the financial operations and conditions of the Company, including recommendations for Company's annual operating and capital budgets.

Section 4.6 Quality of Markets Committee.

The Chairman, with the approval of the Board, shall appoint a Quality of Markets Committee. The Quality of Markets Committee shall provide advice and guidance to the Board on issues relating to the fairness, integrity, efficiency and competitiveness of the information, order handling and execution mechanisms of the Exchange from the perspective of investors, both individual and institutional, retail firms, market making firms, Exchange listed companies and other market participants. The Quality of Markets Committee shall include broad representation of participants in the Exchange, including investors, market makers, integrated retail firms and order entry firms. The Quality of Markets Committee shall include a number of Member Representative members that is equal to at least 20 percent of the total number of members of the Quality of Markets Committee. The number of Non-Industry members of the Quality of Markets Committee shall equal or exceed the sum of the number of Industry members and Member Representative members.

Section 4.7 Business Conduct Committee

There shall be a Business Conduct Committee which shall not be a Board Committee but shall be a committee of the Exchange. The Chairman shall appoint a Business Conduct Committee composed of such number of Exchange Members and individuals who are not Exchange Members as the Chairman shall deem necessary, none of whom shall be Directors. The Business Conduct Committee or any panel thereof shall include at least one officer, director or employee of an Exchange Member.

The jurisdiction, function and powers shall be exercised by the Business Conduct Committee in accordance with the provisions set forth in the MIAX Rules.

ARTICLE V
Nominating Committees

Section 5.1 Election of Nominating Committee and Member Nominating Committee

The Nominating Committee and the Member Nominating Committee shall each be elected on an annual basis by vote of the LLC Member. The LLC Member shall appoint the initial Nominating Committee and Member Nominating Committee consistent with the compositional requirements of this Article V within fifteen (15) days after the Exchange's application for registration as a national securities exchange is granted. Because the first annual meeting of the LLC Member is intended to be held within ninety (90) days after the Exchange's application for registration as a national securities exchange is granted, the initial Nominating Committee and Member Nominating Committee shall serve until the second annual meeting of the LLC Member. Not later than sixty (60) days prior to the date announced as the date for each annual meeting of the LLC Member commencing with the second annual meeting of the LLC Member, the Nominating Committee and the Member Nominating Committee shall nominate candidates to serve on the succeeding year's Nominating Committee and Member Nominating Committee, as applicable, and notify the Secretary of such nominees. Such candidates shall be voted on by the LLC Member at the annual meeting of the LLC Member. Additional candidates

for the Member Nominating Committee may be nominated and elected pursuant to the same process as provided for in Article II, Section 2.4.

Section 5.2 Nominating Committee

The Nominating Committee shall nominate candidates for election to the Board at the annual LLC Member meeting and all other vacant or new Director positions on the Board. The Nominating Committee, in making such nominations, is responsible for ensuring that candidates meet the compositional requirements of Article II, Section 2.2(b). The number of Non-Industry members on the Nominating Committee shall equal or exceed the number of Industry members on the Nominating Committee. A Nominating Committee member may not simultaneously serve on the Nominating Committee and the Board, unless such member is in his or her final year of service on the Board, and following that year, that member may not stand for election to the Board until such time as he or she is no longer a member of the Nominating Committee. No more than one (1) member of the Nominating Committee shall be a current Director, and such Director shall be a Non-Industry Director.

Section 5.3 Member Nominating Committee

The Member Nominating Committee shall nominate candidates for each Member Representative Director position on the Board that is to be elected by Exchange Members or the LLC Member under the terms of these By-Laws. Each member of the Member Nominating Committee shall be a Member Representative member and shall not be required to be a Director of the Company.

ARTICLE VI
Officers, Agents and Employees

Section 6.1 General

The officers of the Company shall include a Chief Executive Officer, a President, a Chief Financial Officer, a Chief Regulatory Officer, a Secretary, a Treasurer, and such other officers as in the Board's opinion are desirable for the conduct of the business of the Company, including but not limited to a Vice Chairman. Any two or more offices may be held by the same person, except that the offices of the President and Secretary may not be held by the same person. No person that is subject to any statutory disqualification may be an officer of the Company.

Section 6.2 Appointment and Tenure

Each officer of the Company shall be appointed by the Board on an annual basis, and shall hold office until his or her successor is appointed and qualified or until his or her earlier death, disability, disqualification, removal or resignation. An officer may serve for any number of terms, consecutive or otherwise.

Section 6.3 Resignation and Removal of Officers; Vacancies

(a) Any officer may resign at any time upon notice of resignation to the Chairman and Chief Executive Officer, the President, or the Secretary. Any such resignation shall take effect upon receipt of such notice or at any later time specified therein, or if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

(b) Any officer of the Company may be removed, with or without cause, by the Board. Such removal shall be without prejudice to the contractual rights of the affected officer, if any, with the Company.

(c) Vacancies in any office of the Company may be filled for the unexpired term by the Board.

Section 6.4 Compensation

The Compensation of the Chairman, the Vice Chairman and the Chief Executive Officer shall be fixed by the Compensation Committee. The salaries of all other officers and agents of the Company shall be fixed by the Chief Executive Officer, in consultation with the Compensation Committee.

Section 6.5 Powers and Duties; Delegation

Each of the officers of the Company shall, unless otherwise ordered by the Board, have such powers and duties as customarily pertain to the respective office, and such further powers and duties as from time to time may be conferred by the Board, or by an officer delegated such authority by the Board. The Board may delegate the duties and powers of any officer of the Company to any other officer or to any Director for a specified period of time and for any reason that the Board may deem sufficient.

Section 6.6 Chief Executive Officer

The Chief Executive Officer shall be the chief executive officer of the Company, shall have general supervision over the business and affairs of the Company and shall serve at the pleasure of the Board. The Chief Executive Officer shall have all powers and duties usually incident to the office of the Chief Executive Officer, except as specifically limited by a resolution of the Board. The Chief Executive Officer shall exercise such other powers and perform such other duties as may be assigned to the Chief Executive Officer from time to time by the Board.

Section 6.7 President

The President shall, in the absence of the Chairman, the Vice Chairman and Chief Executive Officer, preside at all meetings of the Board at which the President is present. The President shall have general supervision over the operations of the Company. The President shall

have all powers and duties usually incident to the office of the President, except as specifically limited by a resolution of the Board. The President shall exercise such other powers and perform such other duties as may be assigned to the President from time to time by the Board.

Section 6.8 Vice President

The Board shall appoint one or more Vice Presidents. In the absence or disability of the President or if the office of President becomes vacant, the Vice Presidents in the order determined by the Board, or if no such determination has been made, in the order of their seniority, shall perform the duties and exercise the powers of the President, subject to the right of the Board at any time to extend or restrict such powers and duties or to assign them to others. Any Vice President may have such additional designations in such Vice President's title as the Board may determine. The Vice Presidents shall generally assist the President in such manner as the President shall direct. Each Vice President shall exercise such other powers and perform such other duties as may be assigned to such Vice President from time to time by the Board, the Chief Executive Officer or the President. The term "Vice President" used in this Section shall include the positions of Executive Vice President, Senior Vice President, and Vice President.

Section 6.9 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 Company's funds and securities; shall keep full and accurate all books and accounts of the Company 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 Company as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Company 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 Company.

Section 6.10 Chief Regulatory Officer

An officer of the Company with the position of Vice President, Senior Vice President or Executive Vice President shall be designated as the Chief Regulatory Officer of the Company. The Chief Regulatory Officer shall have general supervision of the regulatory operations of the Company, including responsibility for overseeing the Company's surveillance, examination, and enforcement functions and for administering any regulatory services agreements with another self-regulatory organization to which the Company is a party. The Chief Regulatory Officer shall report to the Regulatory Oversight Committee. The Chief Regulatory Officer shall meet with the Regulatory Oversight Committee of the Company in executive session at regularly scheduled meetings of such committee, and at any time upon request of the Chief Regulatory Officer or any member of the Regulatory Oversight Committee. The Chief Regulatory Officer may, but is not required to, also serve as the General Counsel of the Company.

Section 6.11 Secretary

The Secretary shall act as Secretary of all meetings of the Board at which the Secretary is present, shall record all the proceedings of all such meetings in a book to be kept for that purpose, shall have supervision over the giving and service of notices of the Company, and shall have supervision over the care and custody of the books and records of the Company. The Secretary shall be empowered to affix the Company's seal, if any, to documents, the execution of which on behalf of the Company under its seal is duly authorized, and when so affixed, may attest the same. The Secretary shall have all powers and duties usually incident to the office of Secretary, except as specifically limited by a resolution of the Board. The Secretary shall exercise such other powers and perform such other duties as may be assigned to the Secretary from time to time by the Board, the Chief Executive Officer or the President.

Section 6.12 Assistant Secretary

In the absence of the Secretary or in the event of the Secretary's inability or refusal to act, any Assistant Secretary, approved by the Board, shall exercise all powers and perform all duties of the Secretary. An Assistant Secretary shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Secretary from time to time by the Board or the Secretary.

Section 6.13 Treasurer

The Treasurer shall have general supervision over the care and custody of the funds and over the receipts and disbursements of the Company and shall cause the funds of the Company to be deposited in the name of the Company in such banks or other depositories as the Board may designate. The Treasurer shall have supervision over the care and safekeeping of the securities of the Company. The Treasurer shall have all powers and duties usually incident to the office of Treasurer except as specifically limited by a resolution of the Board. The Treasurer shall exercise such other powers and perform such other duties as may be assigned to the Treasurer from time to time by the Board, the Chief Executive Officer or the President.

Section 6.14 Assistant Treasurer

In the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, any Assistant Treasurer, approved by the Board, shall exercise all powers and perform all duties of the Treasurer. An Assistant Treasurer shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Treasurer from time to time by the Board or the Treasurer.

ARTICLE VII
Indemnification and Insurance

Section 7.1 Right to Indemnification

Each person who was or is made a party or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she or a person of whom he or she is the legal representative is or was a director or an officer of the Company or is or was serving at the request of the Company as a director, officer, employee or agent of any other corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to any employee benefit plan (hereinafter an "indemnitee"), whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Company to the fullest extent authorized by the LLC Act, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Company to provide broader indemnification rights than the LLC Act permitted the Company to provide prior to such amendment), against all expense, liability and loss (including, without limitation, attorneys' fees, judgments, fines, excise taxes or penalties under the Employee Retirement Income Security Act of 1974, as amended, and amounts paid or to be paid in settlement) reasonably incurred by such indemnitee in connection therewith; provided, however, that except as provided in Section 7.3 with respect to proceedings seeking to enforce rights to indemnification, the Company shall indemnify any such indemnitee seeking indemnification in connection with a proceeding (or part thereof) initiated by such indemnitee only if such proceeding (or part thereof) was authorized by the Board of Directors.

Section 7.2 Right to Advancement of Expenses

The right to indemnification conferred in Section 7.1 shall include the right to be paid by the Company the expenses (including attorneys' fees) incurred in defending any such proceeding in advance of its final disposition (hereinafter an "advancement of expenses"); provided, however, that, if the LLC Act requires, an advancement of expenses incurred by an indemnitee in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Company of an undertaking (hereinafter an "undertaking"), by or on behalf of such indemnitee, 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 (hereinafter a "final adjudication") that such indemnitee is not entitled to be indemnified for such expenses under this Section 7.2 or otherwise.

Section 7.3 Right of Indemnitee to Bring Suit

If a claim under Section 7.1 or Section 7.2 is not paid in full by the Company within thirty (30) days after a written claim has been received by the Company, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty (20) days, the indemnitee may at any time thereafter bring suit against the Company to recover the

unpaid amount of the claim. If successful in whole or in part in any such suit, or in a suit brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the indemnitee shall also be entitled to be paid the expense of prosecuting or defending such suit.

In (i) any suit brought by the indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the indemnitee to enforce a right of an advancement of expenses) it shall be a defense that, and (ii) in any suit brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the Company shall be entitled to recover such expenses upon a final adjudication that, the indemnitee has not met any applicable standard for indemnification set forth in the LLC Act. Neither the failure of the Company (including its Board of Directors, independent legal counsel or the LLC Member) to have made a determination prior to the commencement of such action that indemnification of the indemnitee is proper in the circumstances because the indemnitee has met the applicable standard of conduct set forth in the Act, nor an actual determination by the Company (including its Board of Directors, independent legal counsel or the LLC Member) that the indemnitee has not met such applicable standard of conduct, shall create a presumption that the indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the indemnitee, be a defense to such suit. In any suit brought by the indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article VII or otherwise shall be on the Company.

Section 7.4 Non-Exclusivity of Rights

The right to indemnification and the advancement of expenses conferred in this Article VII shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, provision of the LLC Agreement, provision of these By-Laws, agreement, vote of the LLC Member or disinterested directors or otherwise.

Section 7.5 Insurance

The Company may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Company or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the Company would have the power to indemnify such person against such expense, liability or loss under the law.

Section 7.6 Indemnification of Employees and Agents of the Company

The Company may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification, and rights to the advancement of expenses, to any employee or agent of the Company to the fullest extent of the provisions of this Article VII with respect to the indemnification and advancement of expenses of directors and officers of the Company.

Section 7.7 Contract Rights

The rights to indemnification and to the advancement of expenses conferred in Section 7.1 and Section 7.2 shall be contract rights and such rights shall continue as to an indemnitee who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the indemnitee's heirs, executors and administrators.

Section 7.8 Company Not Liable

Except as provided in the Exchange Rules, the Company shall not be liable for any loss or damage sustained by any current or former Exchange Member growing out of the use or enjoyment by such Exchange Member of the facilities afforded by the Company (or any predecessor or successor thereof) or its subsidiaries.

ARTICLE VIII
Amendments; Emergency By-Laws

Section 8.1 By the LLC Member or Board

These By-Laws may be altered, amended, or repealed, or new By-Laws may be adopted, (i) by the written consent of the LLC Member, or (ii) at any regular or special meeting of the Board by a resolution adopted by the Board.

Section 8.2 Emergency By-Laws

The Board may adopt emergency By-Laws subject to repeal or change by action of the LLC Member which shall, notwithstanding any different provision of law, the Certificate of Formation, the LLC Agreement or these By-Laws, be operative during any emergency resulting from any nuclear or atomic disaster, an attack on the United States or on a locality in which the Company conducts its business or customarily holds meetings of the Board, any catastrophe, or other emergency condition, as a result of which a quorum of the Board or a committee thereof cannot readily be convened for action. Such emergency By-Laws may make any provision that may be practicable and necessary under the circumstances of the emergency.

Section 8.3 Authority to Take Action Under Extraordinary Market Conditions

The Board, or such person or persons as may be designated by the Board, in the event of extraordinary market conditions, shall have the authority to take any action regarding:

(a) the trading in or operation of the national securities exchange operated by the Company or any other organized securities markets that may be operated by the Company, the operation of any automated system owned or operated by the Company, and the participation in any such system or any or all persons or the trading therein of any or all securities; and

(b) the operation of any or all systems of Exchange Members, if, in the opinion of the Board or the person or persons hereby designated, such action is necessary or

appropriate for the protection of investors or the public interest or for the orderly operation of the marketplace or the system.

Section 8.4 Commission Approval

Before any amendment to, alteration or repeal of any provision of the By-Laws of the Company under this Article VIII 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 Commission, then the proposed changes to the By-Laws of the Company shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

ARTICLE IX
Exchange Authorities

Section 9.1 Rules

The Board, acting in accordance with the terms of these By-Laws and the Rules, shall be vested with all powers necessary for the government of the Company as an "exchange" within the meaning of the Act. To promote and enforce just and equitable principles of trade and business, to maintain high standards of commercial honor and integrity among Exchange Members, to collaborate with governmental and other agencies in the promotion of fair practices and the elimination of fraud, and in general to carry out the purposes of the Company and of the Act, the Board is hereby authorized to adopt such rules and such amendments thereto as it may, from time to time, deem necessary or appropriate. If any such rules or amendments thereto are approved by the Commission or otherwise become effective as provided in the Act, they shall become operative Exchange Rules as of the date of Commission approval or effectiveness under the Act unless a later operative date is declared by the Company. The Board is hereby authorized, subject to the provisions of these By-Laws and the Act, to administer, enforce, interpret, issue exemptions from, suspend, or cancel any Rules adopted hereunder.

Section 9.2 Disciplinary Proceedings

(a) The Board is authorized to establish procedures relating to disciplinary proceedings involving Exchange Members and their associated persons.

(b) The Board is authorized to impose appropriate sanctions applicable to Exchange Members, including censure, fine, suspension, or expulsion from membership, suspension or bar from being associated with all Exchange Members, limitation of activities, functions, and operations of an Exchange Member, or any other fitting sanction, and to impose appropriate sanctions applicable to persons associated with Exchange Members, including censure, fine, suspension, or barring a person associated with an Exchange Member from being associated with all Exchange Members, limitation of activities, functions, and operations of a person associated with an Exchange Member, or any other fitting sanction, for:

(i) a breach by an Exchange Member or a person associated with an Exchange Member of any covenant with the Company or its LLC Member;

(ii) violation by an Exchange Member or a person associated with an Exchange Member of any of the terms, conditions, covenants, and provisions of the By-Laws, the Rules, or the federal securities laws, including the rules and regulations adopted thereunder;

(iii) failure by an Exchange Member or person associated with an Exchange Member to: (A) submit a dispute for arbitration as may be required by the Rules; (B) appear or produce any document in the Exchange Member's or person's possession or control as directed pursuant to the Rules; (C) comply with an award of arbitrators properly rendered, where a timely motion to vacate or modify such award has not been made pursuant to applicable law or where such a motion has been denied; or (D) comply with a written and executed settlement agreement obtained in connection with an arbitration or mediation submitted for disposition; or

(iv) failure by an Exchange Member or person associated with an Exchange Member to adhere to any ruling, order, direction, or decision of or to pay any sanction, fine, or costs imposed by the Board or any entity to which the Board has delegated its powers.

Section 9.3 Membership Qualifications

(a) The Board shall have authority to adopt rules and regulations applicable to Exchange Members, applicants seeking to become Exchange Members, and persons associated with applicants or Exchange Members, establishing specified and appropriate standards with respect to the training, experience, competence, financial responsibility, operational capability, and such other qualifications as the Board finds necessary or desirable.

(b) The Board may from time to time make such changes in such rules, regulations, and standards as it deems necessary or appropriate.

(c) Uniform standards for regulatory and other access issues, such as admission to membership and conditions to becoming an Exchange market maker, shall be promulgated and applied on a consistent basis, and the Company shall institute safeguards to ensure fair and evenhanded access to all of its services and facilities.

Section 9.4 Fees, Dues, Assessments, and Other Charges

The Board shall have authority to fix and levy the amount of fees, dues, assessments, and other charges to be paid by Exchange Members and issuers and any other persons using any facility or system that the Company operates or controls; provided, however, that such fees, dues, assessments, and other charges shall be equitably allocated among Exchange Members and any other persons using any facility or system that the Company operates or controls. Any Regulatory Funds will not be used for non-regulatory purposes or distributed to the LLC Member, but rather, shall be applied to fund the legal and regulatory operations of the Company (including surveillance and enforcement activities), or, as the case may be, shall be used to pay restitution and disgorgement of funds intended for customers.

ARTICLE X
Miscellaneous Provisions

Section 10.1 Operational Date of Exchange

The Company has been formed in anticipation of its registration by the Commission as a national securities exchange. During the period between formation and the first date on which the Company commences operating a national securities exchange (the "Operational Date"):

(a) references in the Agreement and By-Laws to "the national securities exchange operated by the Company" shall be construed as references to "the national securities exchange to be operated by the Company"; and

(b) the Board of Directors of the Company may appoint members of the committees to be established under the By-Laws, but shall not be required to appoint all such committee members until the date immediately prior to the Operational Date.

Section 10.2 Fiscal Year

The fiscal year of the Company shall be as determined from time to time by the Board.

Section 10.3 Participation in Board and Committee Meetings

All meetings of the Board (and any committees of the Company) pertaining to the self-regulatory function of the Company (including disciplinary matters) shall be closed to all persons other than members of the Board, Observers, officers, staff, counsel or other advisors whose participation is necessary or appropriate to the proper discharge of such regulatory functions and any representatives of the Commission. In no event shall members of the Board of Directors of Miami International Holdings, Inc. who are not also members of the Board, Observers, or any officers, staff, counsel or advisors of Miami International Holdings, Inc. who are not also officers, staff, counsel or advisors of the Company (or any committees of the Company), be allowed to participate in any meetings of the Board (or any committee of the Company) pertaining to the self-regulatory function of the Company (including disciplinary matters).

Section 10.4 Books and Records; Confidentiality of Information and Records Relating to SRO Function

The books and records of the Company shall be maintained at a location within the United States. All books and records of the Company reflecting confidential information pertaining to the self-regulatory function of the Company (including but not limited to disciplinary matters, trading data, trading practices, and audit information) shall be retained in confidence by the Company and its personnel and will not be used by the Company for any non-regulatory purposes and shall not be made available to any person (including, without limitation, any Exchange Member) other than to personnel of the Commission, and those personnel of the Company, members of committees of the Company, members of the Board, Observers, hearing

officers and other agents of the Company to the extent necessary or appropriate to properly discharge the self-regulatory responsibilities of the Company.

Section 10.5 Execution of Instruments, Contracts, etc.

(a) All checks, drafts, bills of exchange, notes, or other obligations or orders for the payment of money shall be signed in the name of the Company by such officer or officers or person or persons as the Board, or a duly authorized committee thereof, may from time to time designate. Except as otherwise provided by law, the Board, any committee given specific authority in the premises by the Board, or any committee given authority to exercise generally the powers of the Board during intervals between meetings of the Board may authorize any officer, employee, or agent, in the name of and on behalf of the Company, to enter into or execute and deliver deeds, bonds, mortgages, contracts, and other obligations or instruments, and such authority may be general or confined to specific instances.

(b) All applications, written instruments, and papers required by any department of the United States government or by any state, county, municipal, or other governmental authority may be executed in the name of the Company by any officer of the Company, or, to the extent designated for such purpose from time to time by the Board, by an employee or agent of the Company. Such designation may contain the power to substitute, in the discretion of the person named, one or more other persons.

Section 10.6 Power to Vote Stock

Unless otherwise instructed by the Board, the Chairman or the Chief Executive Officer of the Company shall have the power and authority on behalf of the Company to attend and to vote at any meeting of the stockholders, partners or equity holders of any corporation, partnership or any other entity in which the Company may hold stock, partnership or other equity interests, as the case may be, and may exercise on behalf of the Company any and all of the rights and powers incident to the ownership of such stock, partnership or other equity interest at such meeting, and shall have the power and authority to execute and deliver proxies, waivers and consents on behalf of the Company in connection with the exercise by the Company of the rights and powers incident to the ownership of such stock, partnership or other equity interest. The Board may from time to time confer like powers upon any other person or persons.

Section 10.7 Severability

If any provision of these By-Laws, or the application of any provision of these By-Laws to any person or circumstances, is held invalid, the remainder of these By-Laws and the application of such provision to other persons or circumstances shall not be affected.

Effective Date: May 20, 2016

C

State of Delaware
Secretary of State
Division of Corporations
Delivered 11:38 AM 06/29/2011
FILED 11:38 AM 06/29/2011
SRV 110774902 - 4812494 FILE

STATE OF DELAWARE
AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF
MIAMI INTERNATIONAL TECHNOLOGIES, LLC

This filing has been executed and filed in accordance with Section 18-208 of the Limited Liability Company Act. This document is being executed for the purpose of amending and restating the original Certificate of Formation, filed under Miami International Technologies, LLC on May 12, 2010 under file number: 4812494

FIRST: The name of the limited liability company is **Miami International Technologies, LLC**.

SECOND: The address of the registered office of the Company is located at Corporation Trust Center, 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 members agree to be bound by the signed limited liability company agreements except as they may be contradicted by the Limited Liability Company Act of the State of Delaware.

FOURTH: The duration of this limited liability company will be perpetual.

IN WITNESS WHEREOF, the undersigned, an authorized person, has executed this Amended and Restated Certificate of Formation on this date of June 28, 2011.

MIAMI INTERNATIONAL TECHNOLOGIES, LLC

By: _____

Thomas P. Gallagher
Chairman

FIRST AMENDED AND RESTATED
LIMITED LIABILITY COMPANY AGREEMENT
of
MIAMI INTERNATIONAL TECHNOLOGIES, LLC

Miami International Holdings, Inc., a Delaware corporation, the sole member (the "Member") of Miami International Technologies, LLC, a Delaware limited liability company (the "Company"), pursuant to and in accordance with the Delaware Limited Liability Company Act, 6 Del.C. § 18-101, et seq. (the "Act"), hereby declares the following to be the First Amended and Restated Limited Liability Company Agreement (the "Agreement") of the Company which amends and restates in its entirety the Operating Agreement dated June 29, 2010 of the Company (the "Original Operating Agreement").

Section 1. **Formation**. The Company has been formed as a limited liability company under the Act by the filing of a Certificate of Formation with the Office of the Secretary of State of the State of Delaware. The Member agrees to be bound by and comply with the provisions thereof and hereof.

Section 2. **Name**. The name of the limited liability company shall be "Miami International Technologies, LLC", or such other name as the Member may from time to time hereafter designate.

Section 3. **Definitions**. Capitalized terms not otherwise defined herein shall have the meanings set forth therefor in Section 18-101 of the Act.

Section 4. **Purpose**. The Company is formed for the purpose of engaging in any lawful business permitted by the Act or the laws of any jurisdiction in which the Company may do business. The Company shall have the power to engage in all activities and transactions which the Member deems necessary or advisable in connection with the foregoing.

Section 5. **Offices**. The principal place of business and office of the Company shall be located at, and the Company's business shall be conducted from, such place or places as the Member may designate from time to time.

The registered office of the Company in the State of Delaware shall be located at c/o Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. The name and address of the registered agent of the Company for service of process on the Company in the State of Delaware shall be The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. The Member may from time to time change the registered agent or office by an amendment to the certificate of formation of the Company.

Section 6. **Member**. Miami International Holdings, Inc. is the sole member of the Company (the "Member") holding 100% of the membership interests of the Company. The name and business or residence address of the Member is 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540.

Section 7. **Term.** The term of the Company shall commence on the date of filing of the certificate of formation of the Company in accordance with the Act and shall continue until the Company is dissolved and its affairs are wound up in accordance with Section 17 of this Agreement and a certificate of cancellation is filed in accordance with the Act.

Section 8. **Board of Directors; Delegation of Authority and Duties.**

(a) Member and Board of Directors. The Member, acting through the Board (defined below), shall manage and control the business and affairs of the Company, and shall possess all rights and powers as provided in the Act and otherwise by law. Except as otherwise expressly provided for herein, the Member hereby consents to the exercise by the Board of all such powers and rights conferred on them by the Act with respect to the management and control of the Company. Notwithstanding the foregoing and except as explicitly set forth in this Agreement, if a vote, consent or approval of the Member is required by the Act or other applicable law with respect to any act to be taken by the Company or matter considered by the Board, the Member agrees that it shall be deemed to have consented to or approved such act or voted on such matter in accordance with a vote of the Board on such act or matter.

(b) Delegation by Board. The Board shall have the power and authority to delegate to one or more other persons the Board's rights and powers to manage and control the business and affairs of the Company, including to delegate to agents and employees of the Member, a Director (as defined below) or the Company (including Officers), and to delegate by a management agreement or another agreement with, or otherwise to, other persons. The Board may authorize any person (including, without limitation, the Member or any Officer or Director) to enter into and perform under any document on behalf of the Company.

(c) Committees. The Board may, from time to time, designate one or more committees, each of which shall be comprised of at least two Directors. Any such committee, to the extent provided in the enabling resolution and until dissolved by the Board, shall have and may exercise any or all of the authority of the Board. At every meeting of any such committee, the presence of a majority of all the representatives thereof shall constitute a quorum, and the affirmative vote of a majority of the representatives present shall be necessary for the adoption of any resolution. The Board may dissolve any committee at any time, unless otherwise provided in this Agreement.

Section 9. **Establishment of Board of Directors.**

(a) Directors. There shall be established a Board of Directors (the "Board") composed of not less than (1) and no more than fifteen (15) persons as determined from time to time by the Member ("Directors"), each of whom shall be elected by the Member. Any Director may be removed from the Board at any time by the Member. Each Director shall remain in office until his or her death, resignation or removal. In the event of death, resignation or removal of a Director, the party or parties, as applicable, which appointed such Director shall fill the vacancy created. Notwithstanding anything in this Agreement to the contrary, Directors shall not be deemed to be "members" or "managers" (as such terms are defined in the Act) of the Company.

(b) No Individual Authority. No Director has the authority or power to act for or on behalf of the Company, to do any act that would be binding on the Company or to make any expenditures or incur any obligations on behalf of the Company or authorize any of the foregoing, other than acts that are authorized by the Board.

(c) Chairman. The Board shall designate a Director to serve as chairman. The chairman shall, unless a majority of Directors present determine otherwise, preside at all meetings of the Board. If the chairman is absent at any meeting of the Board, a majority of the Directors present shall designate another Director to serve as interim chairman for that meeting.

Section 10. Officers. The Member may, from time to time as it deems advisable, designate natural persons as officers of the Company (the "Officers") or successor Officers of the Company and assign titles to any such person. Unless the Member decides otherwise, if the title is one commonly used for officers of a business corporation formed under the Delaware General Corporation Law, the assignment of such title shall constitute the delegation to such person of the authorities and duties that are normally associated with that office. Any delegation pursuant to this Section 8 may be revoked at any time by the Member. An Officer may be removed with or without cause at any time by the Member.

Section 11. Advisory Board. The Member may appoint any person or persons to act in an advisory capacity to the Company. Such a group shall be known as the Advisory Board.

Section 12. Capital Contributions. The Member shall make capital contributions to the Company from time to time, which amounts shall be set forth in the books and records of the Company.

Section 13. Transfers of Member Interest. The Member may sell, assign, pledge or otherwise transfer or encumber (collectively, a "Transfer") any of its Limited Liability Company Interest in the Company to any Person so long as such Transfer is in writing.

Section 14. Resignation. The Member shall have the right to resign from the Company so long as such resignation is in writing. The provisions hereof with respect to distributions upon resignation are exclusive and no Member shall be entitled to claim any further or different distribution upon resignation under Section 18-604 of the Act or otherwise.

Section 15. Allocations and Distributions. Distributions of cash or other assets of the Company shall be made at such times and in such amounts as the Member may determine. Distributions shall be made to (and profits and losses of the Company shall be allocated among) the Member.

Section 16. Return of Capital. The Member has the right to receive any distributions which include a return of all or any part of such Member's capital contribution, provided that upon the dissolution and winding up of the Company, the assets of the Company shall be distributed as provided in Section 18-804 of the Act.

Section 17. **Dissolution**. The Company shall be dissolved and its affairs wound up upon the occurrence of an event causing a dissolution of the Company under Section 18-801 of the Act, except the Company shall not be dissolved upon the occurrence of an event that terminates the continued membership of a Member if (i) at the time of the occurrence of such event there are at least two Members of the Company, or (ii) within ninety (90) days after the occurrence of such event, all remaining Members agree in writing to continue the business of the Company and to the appointment, effective as of the date of such event, of one or more additional Members. In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority set forth in Section 18-804 of the Act.

Section 18. **Amendments**. This Agreement may be amended only upon the written consent of the Member.

Section 19. **Other Business**. The Member may engage in or possess an interest in other business ventures of every kind and description, independently or with others. The Company shall not have any rights in or to such independent ventures or the income or profits therefrom by virtue of this Agreement.

Section 20. **Limited Liability**. The Member shall not have any liability for the debts, obligations or liabilities of the Company except to the extent provided by the Act.

Section 21. **Exculpation; Indemnification**. Neither the Member, the Officers nor any of their respective affiliates or agents (collectively, "Covered Persons") shall be liable to the Company or any other person or entity who has an interest in the Company for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement. To the fullest extent permitted by applicable law, each Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement; provided, however, that any indemnity under this Section 21 shall be provided out of and to the extent of Company assets only, and neither the Member nor the Officer, as applicable, nor any other Covered Person, shall have personal liability on account thereof.

Section 22. **Banking Matters**. The Member and each Officer and any agent or employee of the Company, or other person designated by such Member or Officer is hereby authorized and empowered (A) to (i) establish one or more domestic or international accounts (including but not limited to, depository, checking, disbursement, custodian, or investment accounts, and other accounts as deemed necessary or expeditious for business purposes of the Company) ("Accounts"), in the name of the Company with any bank, trust company, savings and loan institution, brokerage firm or other financial institution which said Member or Officer shall from time to time designate as a depository of funds, securities or other property of the

Company, for any purpose and on terms and conditions deemed appropriate by such person on behalf of the Company; and (ii) close Accounts of the Company now or hereafter established; and (B) to assign, limit or revoke any and all authority of any agent or employee of the Company, or other person designated by such Member or Officer to (i) sign checks, drafts and orders for the payment of money drawn on the Company's Accounts, and all notes of the Company and all acceptances and endorsements of the Company; (ii) execute or initiate electronic fund transfers; (iii) execute or initiate foreign currency exchange transactions; (iv) execute or initiate the investment of monies; and (v) initiate requests for information for any Account of the Company.

Section 23. **Amendment**. This Agreement may only be amended by a writing duly signed by the Member.

Section 24. **Governing Law**. This Agreement shall be governed by, and construed under, the laws of the State of Delaware, without regard to conflict of law rules.

IN WITNESS WHEREOF, the undersigned has duly executed this Agreement as of May 20, 2011.

MIAMI INTERNATIONAL HOLDINGS, INC.

By: _____
Thomas P. Gallagher
Chairman

D

State of Delaware
Secretary of State
Division of Corporations
Delivered 10:33 AM 06/30/2015
FILED 10:33 AM 06/30/2015
SRV 150990702 - 5776534 FILE

CERTIFICATE OF FORMATION

OF

MIAX GLOBAL, LLC

THIS IS TO CERTIFY that there is hereby formed a limited liability company under and by virtue of the Delaware Limited Liability Company Act (the "Act") (6 Del. C. §18-101, et.seq.).

1. The name of the limited liability company is **MIAX Global, LLC** (the "Company").

2. The address of the registered office of the Company in the State of Delaware is 1209 Orange Street in the City of Wilmington, County of New Castle, and the name of the registered agent at such address for service of process is The Corporation Trust Company.

3. This Certificate shall be effective upon filing.

4. The duration of this limited liability company will be perpetual.

IN WITNESS WHEREOF, the undersigned, an authorized person, has signed this certificate this 30th day of June, 2015.

Barbara Comly

BARBARA COMLY
7 Roszel Road, Suite 5-A
Princeton, NJ 08540

LIMITED LIABILITY COMPANY AGREEMENT
OF
MIAX GLOBAL, LLC

The undersigned is executing this Limited Liability Company Agreement (the "Agreement") as of June 30, 2015 for the purpose of forming a limited liability company (the "Company") pursuant to the provisions of the Delaware Limited Liability Company Act, 6 Del. C. § 18-101 et seq., as amended from time to time (the "Act"), and does hereby agree as follows:

1. **Formation.** A certificate of formation of the Company (the "Certificate") was executed and filed with the Office of the Secretary of State of the State of Delaware on June 30, 2015.

2. **Name.** The name of the limited liability company shall be **"MIAX Global, LLC"**, or such other name as the Member may from time to time hereafter designate.

3. **Definitions.** Capitalized terms not otherwise defined herein shall have the meanings set forth therefor in Section 18-101 of the Act.

4. **Purpose.** The Company is formed for the purpose of engaging in any lawful business permitted by the Act or the laws of any jurisdiction in which the Company may do business. The Company shall have the power to engage in all activities and transactions which the Member deems necessary or advisable in connection with the foregoing.

5. **Offices.** The principal place of business and office of the Company shall be located at, and the Company's business shall be conducted from, such place or places as the Member may designate from time to time.

The registered office of the Company in the State of Delaware shall be located at c/o The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801. The name and address of the registered agent of the Company for service of process on the Company in the State of Delaware shall The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801. The Member may from time to time change the registered agent or office by an amendment to the certificate of formation of the Company.

6. **Member.** Miami International Holdings, Inc. is the sole member of the Company (the "Member") holding 100% of the membership interests of the Company. The name and business or residence address of the Member is 7 Roszel Road, Suite 5-A, Princeton, NJ 08504.

7. **Term.** The term of the Company shall commence on the date of filing of the certificate of formation of the Company in accordance with the Act and shall continue until the Company is dissolved and its affairs are wound up in accordance with Section 17 of this Agreement and a certificate of cancellation is filed in accordance with the Act.

8. **Board of Directors; Delegation of Authority and Duties.**

(a) Member and Board of Directors. The Member, acting through the Board (defined below), shall manage and control the business and affairs of the Company, and shall possess all rights and powers as provided in the Act and otherwise by law. Except as otherwise expressly provided for herein, the Member hereby consents to the exercise by the Board of all such powers and rights conferred on them by the Act with respect to the management and control of the Company. Notwithstanding the foregoing and except as explicitly set forth in this Agreement, if a vote, consent or approval of the Member is required by the Act or other applicable law with respect to any act to be taken by the Company or matter considered by the Board, the Member agrees that it shall be deemed to have consented to or approved such act or voted on such matter in accordance with a vote of the Board on such act or matter.

(b) Delegation by Board. The Board shall have the power and authority to delegate to one or more other persons the Board's rights and powers to manage and control the business and affairs of the Company, including to delegate to agents and employees of the Member, a Director (as defined below) or the Company (including Officers), and to delegate by a management agreement or another agreement with, or otherwise to, other persons. The Board may authorize any person (including, without limitation, the Member or any Officer or Director) to enter into and perform under any document on behalf of the Company.

(c) Committees. The Board may, from time to time, designate one or more committees, each of which shall be comprised of at least two Directors. Any such committee, to the extent provided in the enabling resolution and until dissolved by the Board, shall have and may exercise any or all of the authority of the Board. At every meeting of any such committee, the presence of a majority of all the representatives thereof shall constitute a quorum, and the affirmative vote of a majority of the representatives present shall be necessary for the adoption of any resolution. The Board may dissolve any committee at any time, unless otherwise provided in this Agreement.

9. **Establishment of Board of Directors.**

(a) Directors. There shall be established a Board of Directors (the "Board") composed of not less than (1) and no more than twenty-one (21) persons as determined from time to time by the Member ("Directors"), each of whom shall be elected by the Member. Any Director may be removed from the Board at any time by the Member. Each Director shall remain in office until his or her death, resignation or removal. In the event of death, resignation or removal of a Director, the party or parties, as applicable, which appointed such Director shall fill the vacancy created. Notwithstanding anything in this Agreement to the contrary, Directors shall not be deemed to be "members" or "managers" (as such terms are defined in the Act) of the Company.

(b) No Individual Authority. No Director has the authority or power to act for or on behalf of the Company, to do any act that would be binding on the Company or to make any expenditures or incur any obligations on behalf of the Company or authorize any of the foregoing, other than acts that are authorized by the Board.

(c) Chairman. The Board shall designate a Director to serve as chairman. The chairman shall, unless a majority of Directors present determine otherwise, preside at all meetings of the Board. If the chairman is absent at any meeting of the Board, a majority of the Directors present shall designate another Director to serve as interim chairman for that meeting.

10. **Officers.** The Member may, from time to time as it deems advisable, designate natural persons as officers of the Company (the "Officers") or successor Officers of the Company and assign titles to any such person. Unless the Member decides otherwise, if the title is one commonly used for officers of a business corporation formed under the Delaware General Corporation Law, the assignment of such title shall constitute the delegation to such person of the authorities and duties that are normally associated with that office. Any delegation pursuant to this Section 8 may be revoked at any time by the Member. An Officer may be removed with or without cause at any time by the Member.

11. **Advisory Board.** The Member may appoint any person or persons to act in an advisory capacity to the Company. Such a group shall be known as the Advisory Board.

12. **Capital Contributions**. The Member shall make capital contributions to the Company from time to time, which amounts shall be set forth in the books and records of the Company.

13. **Transfers of Member Interest.** The Member may sell, assign, pledge or otherwise transfer or encumber (collectively, a "Transfer") any of its Limited Liability Company Interest in the Company to any Person so long as such Transfer is in writing.

14. **Resignation**. The Member shall have the right to resign from the Company so long as such resignation is in writing. The provisions hereof with respect to distributions upon resignation are exclusive and no Member shall be entitled to claim any further or different distribution upon resignation under Section 18-604 of the Act or otherwise.

15. **Allocations and Distributions.** Distributions of cash or other assets of the Company shall be made at such times and in such amounts as the Member may determine. Distributions shall be made to (and profits and losses of the Company shall be allocated among) the Member.

16. **Return of Capital**. The Member has the right to receive any distributions which include a return of all or any part of such Member's capital contribution, provided that upon the dissolution and winding up of the Company, the assets of the Company shall be distributed as provided in Section 18-804 of the Act.

17. **Dissolution**. The Company shall be dissolved and its affairs wound up upon the occurrence of an event causing a dissolution of the Company under Section 18-801 of the Act, except the Company shall not be dissolved upon the occurrence of an event that terminates the continued membership of a Member if (i) at the time of the occurrence of such event there are at least two Members of the Company, or (ii) within ninety (90) days after the occurrence of such

event, all remaining Members agree in writing to continue the business of the Company and to the appointment, effective as of the date of such event, of one or more additional Members. In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority set forth in Section 18-804 of the Act.

18. **Amendments**. This Agreement may be amended only upon the written consent of the Member.

19. **Other Business**. The Member may engage in or possess an interest in other business ventures of every kind and description, independently or with others. The Company shall not have any rights in or to such independent ventures or the income or profits therefrom by virtue of this Agreement.

20. **Limited Liability**. The Member shall not have any liability for the debts, obligations or liabilities of the Company except to the extent provided by the Act.

21. **Exculpation; Indemnification**. Neither the Member, the Officers nor any of their respective affiliates or agents (collectively, "Covered Persons") shall be liable to the Company or any other person or entity who has an interest in the Company for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement. To the fullest extent permitted by applicable law, each Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement; provided, however, that any indemnity under this Section 21 shall be provided out of and to the extent of Company assets only, and neither the Member nor the Officer, as applicable, nor any other Covered Person, shall have personal liability on account thereof.

22. **Banking Matters**. The Member and each Officer and any agent or employee of the Company, or other person designated by such Member or Officer is hereby authorized and empowered (A) to (i) establish one or more domestic or international accounts (including but not limited to, depository, checking, disbursement, custodian, or investment accounts, and other accounts as deemed necessary or expeditious for business purposes of the Company) ("Accounts"), in the name of the Company with any bank, trust company, savings and loan institution, brokerage firm or other financial institution which said Member or Officer shall from time to time designate as a depository of funds, securities or other property of the Company, for any purpose and on terms and conditions deemed appropriate by such person on behalf of the Company; and (ii) close Accounts of the Company now or hereafter established; and (B) to assign, limit or revoke any and all authority of any agent or employee of the Company, or other person designated by such Member or Officer to (i) sign checks, drafts and orders for the payment of money drawn on the Company's Accounts, and all notes of the Company and all

acceptances and endorsements of the Company; (ii) execute or initiate electronic fund transfers; (iii) execute or initiate foreign currency exchange transactions; (iv) execute or initiate the investment of monies; and (v) initiate requests for information for any Account of the Company.

23. **Authorized Person**. Delaware Business Incorporators, Inc. is hereby designated as an "authorized person" within the meaning of the Act, and has executed, delivered and filed the Certificate with the Secretary of State of the State of Delaware. Upon the filing of the Certificate with the Secretary of State of Delaware, Delaware Business Incorporators, Inc.'s powers as an "authorized person" ceased.

24. **Amendment**. This Agreement may only be amended by a writing duly signed by the Member.

25. **Governing Law**. This Agreement shall be governed by, and construed under, the laws of the State of Delaware, without regard to conflict of law rules.

IN WITNESS WHEREOF, the undersigned has duly executed this Agreement as of the date first written above.

MIAMI INTERNATIONAL HOLDINGS, INC.

By: Thomas P. Gallagher

THOMAS P. GALLAGHER
Chairman and Chief Executive Officer
7 Roszel Road, Suite 5-A
Princeton, NJ 08540

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State of Delaware
Secretary of State
Division of Corporations
Delivered 12:35 PM 06/17/2011
FILED 12:35 PM 06/17/2011
SRV 110734855 - 4465980 FILE

STATE OF DELAWARE
AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF
MIAMI INTERNATIONAL FUTURES EXCHANGE, LLC

This filing has been executed and filed in accordance with Section 18-208 of the Limited Liability Company Act. This document is being executed for the purpose of amending and restating the original Certificate of Formation, filed under Miami Board of Trade, LLC on November 30, 2007, as amended by the Certificate of Amendment, filed on April 14, 2010 under file number: 4465980.

FIRST: The name of the limited liability company is **Miami International Futures Exchange, LLC.**

SECOND: The address of the registered office of the Company is located at Corporation Trust Center, 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 members agree to be bound by the signed limited liability company agreements except as they may be contradicted by the Limited Liability Company Act of the State of Delaware.

FOURTH: The duration of this limited liability company will be perpetual.

IN WITNESS WHEREOF, the undersigned, an authorized person, has executed this Amended and Restated Certificate of Formation on this date of June 17, 2011.

MIAMI INTERNATIONAL FUTURES EXCHANGE, LLC

By: _____

Thomas P. Gallagher
Chairman

FIRST AMENDED AND RESTATED
LIMITED LIABILITY COMPANY AGREEMENT
of
MIAMI INTERNATIONAL FUTURES EXCHANGE, LLC

Miami International Holdings, Inc., a Delaware corporation, the sole member (the "Member") of Miami International Futures Exchange, LLC, a Delaware limited liability company (the "Company"), pursuant to and in accordance with the Delaware Limited Liability Company Act, 6 Del.C. § 18-101, et seq. (the "Act"), hereby declares the following to be the First Amended and Restated Limited Liability Company Agreement (the "Agreement") of the Company which amends and restates in its entirety the Operating Agreement dated February 1, 2008 of the Company (the "Original Operating Agreement").

Section 1. **Formation**. The Company has been formed as a limited liability company under the Act by the filing of a Certificate of Formation with the Office of the Secretary of State of the State of Delaware. The Member agrees to be bound by and comply with the provisions thereof and hereof.

Section 2. **Name.** The name of the limited liability company shall be "Miami Board of Trade, LLC", or such other name as the Member may from time to time hereafter designate.

Section 3. **Definitions.** Capitalized terms not otherwise defined herein shall have the meanings set forth therefor in Section 18-101 of the Act.

Section 4. **Purpose.** The Company is formed for the purpose of engaging in any lawful business permitted by the Act or the laws of any jurisdiction in which the Company may do business. The Company shall have the power to engage in all activities and transactions which the Member deems necessary or advisable in connection with the foregoing.

Section 5. **Offices.** The principal place of business and office of the Company shall be located at, and the Company's business shall be conducted from, such place or places as the Member may designate from time to time.

The registered office of the Company in the State of Delaware shall be located at c/o The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. The name and address of the registered agent of the Company for service of process on the Company in the State of Delaware shall be The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. The Member may from time to time change the registered agent or office by an amendment to the certificate of formation of the Company.

Section 6. **Member.** Miami International Holdings, Inc. is the sole member of the Company (the "Member") holding 100% of the membership interests of the Company. The name and business or residence address of the Member is 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540.

Section 7. **Term.** The term of the Company shall commence on the date of filing of the certificate of formation of the Company in accordance with the Act and shall continue until the Company is dissolved and its affairs are wound up in accordance with Section 17 of this Agreement and a certificate of cancellation is filed in accordance with the Act.

Section 8. **Board of Directors; Delegation of Authority and Duties.**

(a) Member and Board of Directors. The Member, acting through the Board (defined below), shall manage and control the business and affairs of the Company, and shall possess all rights and powers as provided in the Act and otherwise by law. Except as otherwise expressly provided for herein, the Member hereby consents to the exercise by the Board of all such powers and rights conferred on them by the Act with respect to the management and control of the Company. Notwithstanding the foregoing and except as explicitly set forth in this Agreement, if a vote, consent or approval of the Member is required by the Act or other applicable law with respect to any act to be taken by the Company or matter considered by the Board, the Member agrees that it shall be deemed to have consented to or approved such act or voted on such matter in accordance with a vote of the Board on such act or matter.

(b) Delegation by Board. The Board shall have the power and authority to delegate to one or more other persons the Board's rights and powers to manage and control the business and affairs of the Company, including to delegate to agents and employees of the Member, a Director (as defined below) or the Company (including Officers), and to delegate by a management agreement or another agreement with, or otherwise to, other persons. The Board may authorize any person (including, without limitation, the Member or any Officer or Director) to enter into and perform under any document on behalf of the Company.

(c) Committees. The Board may, from time to time, designate one or more committees, each of which shall be comprised of at least two Directors. Any such committee, to the extent provided in the enabling resolution and until dissolved by the Board, shall have and may exercise any or all of the authority of the Board. At every meeting of any such committee, the presence of a majority of all the representatives thereof shall constitute a quorum, and the affirmative vote of a majority of the representatives present shall be necessary for the adoption of any resolution. The Board may dissolve any committee at any time, unless otherwise provided in this Agreement.

Section 9. **Establishment of Board of Directors.**

(a) Directors. There shall be established a Board of Directors (the "Board") composed of not less than (1) and no more than twenty-one (21) persons as determined from time to time by the Member ("Directors"), each of whom shall be elected by the Member. Any Director may be removed from the Board at any time by the Member. Each Director shall remain in office until his or her death, resignation or removal. In the event of death, resignation or removal of a Director, the party or parties, as applicable, which appointed such Director shall fill the vacancy created. Notwithstanding anything in this Agreement to the contrary, Directors shall

not be deemed to be "members" or "managers" (as such terms are defined in the Act) of the Company.

(b) No Individual Authority. No Director has the authority or power to act for or on behalf of the Company, to do any act that would be binding on the Company or to make any expenditures or incur any obligations on behalf of the Company or authorize any of the foregoing, other than acts that are authorized by the Board.

(c) Chairman. The Board shall designate a Director to serve as chairman. The chairman shall, unless a majority of Directors present determine otherwise, preside at all meetings of the Board. If the chairman is absent at any meeting of the Board, a majority of the Directors present shall designate another Director to serve as interim chairman for that meeting.

Section 10. Officers. The Member may, from time to time as it deems advisable, designate natural persons as officers of the Company (the "Officers") or successor Officers of the Company and assign titles to any such person. Unless the Member decides otherwise, if the title is one commonly used for officers of a business corporation formed under the Delaware General Corporation Law, the assignment of such title shall constitute the delegation to such person of the authorities and duties that are normally associated with that office. Any delegation pursuant to this Section 10 may be revoked at any time by the Member. An Officer may be removed with or without cause at any time by the Member.

Section 11. Advisory Board. The Member may appoint any person or persons to act in an advisory capacity to the Company. Such a group shall be known as the Advisory Board.

Section 12. Capital Contributions. The Member shall make capital contributions to the Company from time to time, which amounts shall be set forth in the books and records of the Company.

Section 13. Transfers of Member Interest. The Member may sell, assign, pledge or otherwise transfer or encumber (collectively, a "Transfer") any of its Limited Liability Company Interest in the Company to any Person so long as such Transfer is in writing.

Section 14. Resignation. The Member shall have the right to resign from the Company so long as such resignation is in writing. The provisions hereof with respect to distributions upon resignation are exclusive and no Member shall be entitled to claim any further or different distribution upon resignation under Section 18-604 of the Act or otherwise.

Section 15. Allocations and Distributions. Distributions of cash or other assets of the Company shall be made at such times and in such amounts as the Member may determine. Distributions shall be made to (and profits and losses of the Company shall be allocated among) the Member.

Section 16. Return of Capital. The Member has the right to receive any distributions which include a return of all or any part of such Member's capital contribution, provided that

upon the dissolution and winding up of the Company, the assets of the Company shall be distributed as provided in Section 18-804 of the Act.

Section 17. **Dissolution**. The Company shall be dissolved and its affairs wound up upon the occurrence of an event causing a dissolution of the Company under Section 18-801 of the Act, except the Company shall not be dissolved upon the occurrence of an event that terminates the continued membership of a Member if (i) at the time of the occurrence of such event there are at least two Members of the Company, or (ii) within ninety (90) days after the occurrence of such event, all remaining Members agree in writing to continue the business of the Company and to the appointment, effective as of the date of such event, of one or more additional Members. In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority set forth in Section 18-804 of the Act.

Section 18. **Amendments**. This Agreement may be amended only upon the written consent of the Member.

Section 19. **Other Business**. The Member may engage in or possess an interest in other business ventures of every kind and description, independently or with others. The Company shall not have any rights in or to such independent ventures or the income or profits therefrom by virtue of this Agreement.

Section 20. **Limited Liability**. The Member shall not have any liability for the debts, obligations or liabilities of the Company except to the extent provided by the Act.

Section 21. **Exculpation; Indemnification**. Neither the Member, the Officers nor any of their respective affiliates or agents (collectively, "Covered Persons") shall be liable to the Company or any other person or entity who has an interest in the Company for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement. To the fullest extent permitted by applicable law, each Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement; provided, however, that any indemnity under this Section 21 shall be provided out of and to the extent of Company assets only, and neither the Member nor the Officer, as applicable, nor any other Covered Person, shall have personal liability on account thereof.

Section 22. **Banking Matters**. The Member and each Officer and any agent or employee of the Company, or other person designated by such Member or Officer is hereby authorized and empowered (A) to (i) establish one or more domestic or international accounts (including but not limited to, depository, checking, disbursement, custodian, or investment accounts, and other accounts as deemed necessary or expeditious for business purposes of the

Company) ("Accounts"), in the name of the Company with any bank, trust company, savings and loan institution, brokerage firm or other financial institution which said Member or Officer shall from time to time designate as a depository of funds, securities or other property of the Company, for any purpose and on terms and conditions deemed appropriate by such person on behalf of the Company; and (ii) close Accounts of the Company now or hereafter established; and (B) to assign, limit or revoke any and all authority of any agent or employee of the Company, or other person designated by such Member or Officer to (i) sign checks, drafts and orders for the payment of money drawn on the Company's Accounts, and all notes of the Company and all acceptances and endorsements of the Company; (ii) execute or initiate electronic fund transfers; (iii) execute or initiate foreign currency exchange transactions; (iv) execute or initiate the investment of monies; and (v) initiate requests for information for any Account of the Company.

Section 23. **Amendment**. This Agreement may only be amended by a writing duly signed by the Member.

Section 24. **Governing Law**. This Agreement shall be governed by, and construed under, the laws of the State of Delaware, without regard to conflict of law rules.

IN WITNESS WHEREOF, the undersigned has duly executed this Agreement as of May 20, 2011.

MIAMI INTERNATIONAL HOLDINGS, INC.

By: _____
Thomas P. Gallagher
Chairman

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CERTIFICATE OF FORMATION

OF

MIAX EMERALD, LLC

THIS IS TO CERTIFY that there is hereby formed a limited liability company under and by virtue of the Delaware Limited Liability Company Act (the "Act") (6 Del. C. §18-101, et. seq.).

1. The name of the limited liability company is **MIAX Emerald, LLC** (the "Company").

2. The address of the registered office of the Company in the State of Delaware is 1209 Orange Street in the City of Wilmington, County of New Castle, ZIP Code 19801, and the name of the registered agent at such address for service of process is The Corporation Trust Company.

3. This Certificate shall be effective upon filing.

4. The duration of this limited liability company will be perpetual.

IN WITNESS WHEREOF, the undersigned, an authorized person, has signed this certificate this 30th day of January, 2018.

BARBARA J. COMLY
7 Roszel Road, 5th Floor
Princeton, NJ 08540

State of Delaware
Secretary of State
Division of Corporations
Delivered 09:46 AM 01/30/2018
FILED 09:46 AM 01/30/2018
SR 20180580703 - File Number 6733169

AMENDED AND RESTATED
LIMITED LIABILITY COMPANY AGREEMENT
OF
MIAX EMERALD, LLC
(a Delaware limited liability company)

Miami International Holdings, Inc., a Delaware corporation, the sole member (the "LLC Member") of **MIAX Emerald, LLC**, a Delaware limited liability company (the "Company"), pursuant to and in accordance with the Delaware Limited Liability Company Act, 6 Del.C. § 18-101, et seq. (the "LLC Act"), hereby declares the following to be the Amended and Restated Limited Liability Company Agreement (the "LLC Agreement") of the Company which amends and restates in its entirety the Limited Liability Company Agreement dated February 1, 2018 of the Company (the "Operating Agreement"). Capitalized terms not otherwise defined herein shall have the meanings set forth on Schedule A to this LLC Agreement.

Section 1. Formation of the Company. The Company has been formed as a limited liability company under the LLC Act by the filing of a Certificate of Formation with the Office of the Secretary of State of the State of Delaware. The LLC Member agrees to be bound by and comply with the provisions thereof and hereof.

Section 2. Name. The name of the Company is "MIAX Emerald, LLC".

Section 3. Principal Place of Business. The location of the principal place of business of the Company shall be 7 Roszel Road, 5th Floor, Princeton, New Jersey 08540, or such other place as determined by the Board of Directors from time to time.

Section 4. Registered Office; Registered Agent. The registered office of the Company required by the LLC Act to be maintained in the State of Delaware shall be 3422 Old Capitol Trail, Suite 700, Wilmington, DE 19808-6192, County of New Castle or such other office as the Board of Directors may designate from time to time. The registered agent for the Company shall be Delaware Business Incorporators, Inc., or such other registered agent as the Board of Directors may designate from time to time.

Section 5. Term. The Company shall continue until the Company is terminated in accordance with the provisions of this LLC Agreement.

Section 6. LLC Member. The mailing address of the LLC Member is set forth on Schedule B attached hereto. The LLC Member was admitted to the Company as an LLC Member of the Company upon its execution of a counterpart signature page to the Operating Agreement at which time it acquired 100% of the limited liability company interests of the Company.

Section 7. Purpose of the Company. The purpose of the Company shall be to conduct the operations of an "exchange" within the meaning of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and to conduct any lawful business or activity whatsoever, as

permitted by applicable law and as determined from time to time by the board of directors of the Company (the "Board of Directors").

Section 8. Powers. The Company, and the Board of Directors and the Officers of the Company on behalf of the Company, (i) shall have and exercise all powers necessary, convenient or incidental to accomplish its purposes as set forth in Section 7 and (ii) shall have and exercise all of the powers and rights conferred upon limited liability companies formed pursuant to the LLC Act.

Section 9. Management.

(a) Board of Directors. The business and affairs of the Company shall be managed by or under the direction of a Board of Directors. Each Director is hereby designated as a "manager" within the meaning of the LLC Act. All Directors shall be elected by the LLC Member in the manner described in the By-Laws (as defined below). Each Director shall execute and deliver an instrument accepting such appointment and agreeing to be bound by all the terms and conditions of this LLC Agreement and the By-Laws. A Director need not be an LLC Member or an Exchange Member. The Directors as of the date of this LLC Agreement are set forth on Schedule C attached hereto.

(b) Powers. The Board of Directors shall have the power to do any and all acts necessary, convenient or incidental to or for the furtherance of the purposes described herein, including all powers, statutory or otherwise. The Board of Directors has the authority to bind the Company.

(c) By-Laws. The Company, the LLC Member and the Board of Directors hereby adopt the By-Laws of the Company in the form attached hereto as Exhibit A, as the same may be amended from time to time in accordance with the terms therein and in this LLC Agreement (the "By-Laws"). Each member of the Board of Directors, each Officer and the LLC Member shall be subject to the express provisions of this LLC Agreement and of the By-Laws. In case of any conflict between the provisions of this LLC Agreement and any provisions of the By-Laws, the provisions of this LLC Agreement shall control.

(d) Directors as Agents. To the extent of their powers set forth in this LLC Agreement, the Directors are agents of the Company for the purpose of the Company's business, and the actions of the Directors taken in accordance with such powers set forth in this LLC Agreement shall bind the Company. Notwithstanding the last sentence of Section 18-402 of the LLC Act, except as provided in this LLC Agreement, the By-Laws or in a resolution of the Directors, a Director may not bind the Company.

Section 10. Officers.

(a) Officers of the Company. Except as provided herein, the Board may, from time to time as it deems advisable, select natural persons who are employees or agents of the Company and designate them as officers of the Company (the "Officers") and assign titles (including, without limitation, Chief Executive Officer, Vice President, Chief Financial Officer,

Chief Regulatory Officer, Secretary and Treasurer) to any such person. The Board may appoint such other Officers and agents as it shall deem necessary or advisable who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board. The salaries of all Officers and agents of the Company shall be fixed by or in the manner prescribed by the By-Laws. The Officers of the Company shall hold office until their successors are chosen and qualified. Any Officer may be removed at any time, with or without cause, by the Board. Any vacancy occurring in any office of the Company shall be filled by the Board.

(b) Officers as Agents. The Officers, to the extent of their powers set forth in this LLC Agreement, the By-Laws or otherwise vested in them by action of the Board not inconsistent with this LLC Agreement, are agents of the Company for the purpose of the Company's business, and the actions of the Officers taken in accordance with such powers shall bind the Company.

(c) Duties of Board and Officers. Except to the extent otherwise modified herein, each Director and Officer shall have a fiduciary duty of loyalty and care similar to that of directors and officers of business corporations organized under the General Corporation Law of the State of Delaware.

Section 11. Advisory Board. The LLC Member may appoint any person or persons to act in an advisory capacity to the Company. Such a group shall be known as the Advisory Board.

Section 12. Limited Liability. Except as otherwise expressly provided by the LLC Act, the debts, obligations and liabilities of the Company, whether arising in contract, tort or otherwise (including, without limitation, those arising as member, owner or shareholder of another company, partnership or entity), shall be the debts, obligations and liabilities solely of the Company, and neither the LLC Member nor any Director or Officer shall be obligated personally for any such debt, obligation or liability of the Company solely by reason of being an LLC Member or Director or Officer of the Company.

Section 13. Capital Contributions. The LLC Member has contributed to the Company the amounts set forth in the books and records of the Company.

Section 14. Additional Contributions. The LLC Member is not required to make any additional capital contribution to the Company. However, the LLC Member may make additional capital contributions to the Company at any time upon the consent of such LLC Member. To the extent that the LLC Member makes an additional capital contribution to the Company, the LLC Member shall revise the books and records of the Company. The provisions of this LLC Agreement, including this Section 14, are intended to benefit the LLC Member and, to the fullest extent permitted by law, shall not be construed as conferring any benefit upon any creditor of the Company (and no such creditor of the Company shall be a third-party beneficiary of this LLC Agreement), and the LLC Member shall not have any duty or obligation to any creditor of the Company to make any contribution to the Company or to issue any call for capital pursuant to this LLC Agreement.

Section 15. **Allocation of Profits and Losses.** The Company's profits and losses shall be allocated to the LLC Member.

Section 16. **Distributions.** Distributions shall be made to the LLC Member at the times and in the aggregate amounts determined by the Board. Notwithstanding any provision to the contrary contained in this LLC Agreement, (i) the Company shall not be required to make a distribution to the LLC Member on account of its interest in the Company if such distribution would violate the LLC Act or any other applicable law, and (ii) the Company shall not make a distribution to the LLC Member using Regulatory Funds.

Section 17. **Books and Records.**

(a) The Board shall keep or cause to be kept complete and accurate books of account and records with respect to the Company's business. The books and records of the Company shall at all times be maintained by the Board at a location within the United States. The LLC Member and its duly authorized representatives shall have the right to examine the Company books, records and documents during normal business hours. The Company, and the Board on behalf of the Company, shall not have the right to keep confidential from the LLC Member any information that the Board would otherwise be permitted to keep confidential from the LLC Member pursuant to Section 18-305(c) of the LLC Act. The Company's books of account shall be kept using the method of accounting determined by the LLC Member. The Company's independent auditor shall be an independent public accounting firm selected by the Board.

(b) All books and records of the Company reflecting confidential information pertaining to the self-regulatory function of the Company (including but not limited to disciplinary matters, trading data, trading practices, and audit information) shall be retained in confidence by the Company and its personnel and will not be used by the Company for any non-regulatory purposes and shall not be made available to any person (including, without limitation, any Exchange Member) other than to personnel of the Commission, and those personnel of the Company, members of committees of the Company, members of the Board, hearing officers and other agents of the Company to the extent necessary or appropriate to properly discharge the self-regulatory responsibilities of the Company.

Section 18. **Reports.** The Board shall, after the end of each fiscal year, use reasonable efforts to cause the Company's independent accountants to prepare and transmit to the LLC Member as promptly as possible any such tax information as may be reasonably necessary to enable the LLC Member to prepare its federal, state and local income tax returns relating to such fiscal year.

Section 19. **Other Business.** Unless otherwise restricted by law, the LLC Member, and any Officer, Director, employee or agent of the Company and any Affiliate of the LLC Member may engage in or possess an interest in other business ventures (unconnected with the Company) of every kind and description, independently or with others. The Company shall not have any rights in or to such independent ventures or the income or profits therefrom by virtue of this LLC Agreement.

Section 20. Exculpation and Indemnification.

(a) Neither the LLC Member nor any Officer, Director, employee or agent of the Company nor any employee, representative, agent or affiliate of the LLC Member (collectively, the "Covered Persons") shall be liable to the Company or any other Person who is bound by this LLC Agreement for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this LLC Agreement, except that a Covered Person shall be liable for any such loss, damage or claim incurred by reason of such Covered Person's willful misconduct.

(b) To the fullest extent permitted by applicable law, a Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this LLC Agreement, except that no Covered Person shall be entitled to be indemnified in respect of any loss, damage or claim incurred by such Covered Person by reason of such Covered Person's willful misconduct with respect to such acts or omissions; provided, however, that any indemnity under this Section 20 by the Company shall be provided out of and to the extent of Company assets only, and the LLC Member shall not have personal liability on account thereof.

(c) To the fullest extent permitted by applicable law, expenses (including reasonable legal fees) incurred by a Covered Person defending any claim, demand, action, suit or proceeding shall, from time to time, be advanced by the Company prior to the final disposition of such claim, demand, action, suit or proceeding upon receipt by the Company of an undertaking by or on behalf of the Covered Person to repay such amount if it shall be determined that the Covered Person is not entitled to be indemnified as authorized in this Section 20.

(d) A Covered Person shall be fully protected in relying in good faith upon the records of the Company and upon such information, opinions, reports or statements presented to the Company by any Person as to matters the Covered Person reasonably believes are within such other Person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Company, including information, opinions, reports or statements as to the value and amount of the assets, liabilities or any other facts pertinent to the existence and amount of assets from which distributions to the LLC Member might properly be paid.

(e) To the extent that, at law or in equity, a Covered Person has duties (including fiduciary duties) and liabilities relating thereto to the Company or to any other Covered Person, a Covered Person acting under this LLC Agreement shall not be liable to the Company or to any other Covered Person who is bound by this LLC Agreement for its good faith reliance on the provisions of this LLC Agreement or any approval or authorization granted by the Company or any other Covered Person.

(f) The foregoing provisions of this Section 20 shall survive any termination of this LLC Agreement and are in addition to any indemnification of Covered Persons provided

by any agreement between the Company and a Covered Person, the By-Laws, by statute, or otherwise.

Section 21. Assignments. The LLC Member may assign, in whole or in part, its limited liability company interest in the Company (the "LLC Interest"); provided, however, such assignment 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 Exchange Act. The assignment of the LLC Interest shall entitle the assignee to exercise the rights of the LLC Member of the Company under this LLC Agreement and to enjoy all of the benefits of the LLC Interest.

Section 22. Dissolution.

(a) The Company shall be dissolved and its affairs shall be wound up upon the first to occur of the following: (i) the consent of the LLC Member and a majority of the whole Board, (ii) the termination of the legal existence of the LLC Member or the occurrence of any other event that terminates the continued membership of the LLC Member in the Company unless the Company is continued without dissolution in a manner permitted by this LLC Agreement or the LLC Act or (iii) the entry of a decree of judicial dissolution under Section 18-802 of the LLC Act.

(b) Notwithstanding any other provision of this LLC Agreement, the Bankruptcy of the LLC Member shall not cause the LLC Member to cease to be an LLC Member of the Company and upon the occurrence of such an event, the Company shall continue without dissolution.

(c) In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority, set forth in Section 18-804 of the LLC Act.

(d) The Company shall terminate when (i) all of the assets of the Company, after payment of or due provision for all debts, liabilities and obligations of the Company, shall have been distributed to the LLC Member in the manner provided for in this LLC Agreement and (ii) the Certificate of Formation shall have been canceled in the manner required by the LLC Act.

Section 23. Benefits of LLC Agreement - No Third-Party Rights. None of the provisions of this LLC Agreement shall be for the benefit of or enforceable by any creditor of the Company or by any creditor of the LLC Member. Nothing in this LLC Agreement shall be deemed to create any right in any Person (other than Covered Persons and to the extent provided in Article II of the By-Laws, Exchange Members) not a party hereto, and this LLC Agreement shall not be construed in any respect to be a contract in whole or in part for the benefit of any third Person (other than the Covered Persons and to the extent provided in Article II of the By-Laws, Exchange Members).

Section 24. Severability of Provisions. Each provision of this LLC Agreement shall be considered severable and if for any reason any provision or provisions herein are determined to

be invalid, unenforceable or illegal under any existing or future law, such invalidity, unenforceability or illegality shall not impair the operation of or affect those portions of this LLC Agreement which are valid, enforceable and legal.

Section 25. Entire LLC Agreement. This LLC Agreement constitutes the entire agreement of the parties with respect to the subject matter hereof.

Section 26. Binding Agreement. Notwithstanding any other provision of this LLC Agreement, the LLC Member agrees that this LLC Agreement constitutes a legal, valid and binding agreement of the LLC Member and is enforceable against the LLC Member, in accordance with its terms.

Section 27. Governing Law. This LLC Agreement shall be governed by and construed under the laws of the State of Delaware (without regard to conflict of laws principles), all rights and remedies being governed by said laws.

Section 28. Amendments.

(a) This LLC Agreement may be modified, altered, supplemented or amended by a resolution adopted by the Board and a written agreement executed and delivered by the LLC Member.

(b) Before any amendment to, or repeal of, any provision of this LLC Agreement shall be effective, those changes shall be submitted to the Board of Directors of the Company and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this LLC Agreement shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

Section 29. Notices. Any notices required to be delivered hereunder shall be in writing and personally delivered, mailed or sent by telecopy, electronic mail or other similar form of rapid transmission, and shall be deemed to have been duly given upon receipt (i) in the case of the Company, to the Company at its address in Section 3, (ii) in the case of the LLC Member, to the LLC Member at its address as listed on Schedule B attached hereto and (iii) in the case of either of the foregoing, at such other address as may be designated by written notice to the other party.

IN WITNESS WHEREOF, the undersigned, intending to be legally bound hereby, has duly executed this Amended and Restated Limited Liability Company Agreement as of the 21st day of December, 2018.

MEMBER:

MIAMI INTERNATIONAL HOLDINGS, INC.

By: _____

Thomas P. Gallagher
Chairman

SCHEDULE A

Definitions

A. Definitions

When used in this LLC Agreement, the following terms not otherwise defined herein have the following meanings:

An "affiliate" of, or person "affiliated" with a specific person, is a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified.

"Bankruptcy" means, with respect to any Person, if (A) such Person (i) makes an assignment for the benefit of creditors, (ii) files a voluntary petition in bankruptcy, (iii) is adjudged a bankrupt or insolvent, or has entered against it an order for relief, in any bankruptcy or insolvency proceedings, (iv) files a petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, liquidation or similar relief under any statute, law or regulation, (v) files an answer or other pleading admitting or failing to contest the material allegations of a petition filed against it in any proceeding of this nature, or (vi) seeks, consents to or acquiesces in the appointment of a trustee, receiver or liquidator of the Person or of all or any substantial part of its properties; or (B) (i) 120 days after the commencement of any proceeding against the Person seeking reorganization, arrangement, composition, readjustment, liquidation or similar relief under any statute, law or regulation, the proceeding has not been dismissed, or (ii) within 90 days after the appointment without such Person's consent or acquiescence of a trustee, receiver or liquidator of such Person or of all or any substantial part of its properties, the appointment is not vacated or stayed, or within 90 days after the expiration of any such stay, the appointment is not vacated. The foregoing definition of "Bankruptcy" is intended to replace and shall supersede and replace the definition of "Bankruptcy" set forth in Sections 18-101(1) and 18-304 of the LLC Act.

"Board" or "Board of Directors" means the Board of Directors of the Company.

"By-Laws" has the meaning set forth in Section 9(c).

"Certificate of Formation" means the Certificate of Formation of the Company filed with the Secretary of State of the State of Delaware on January 30, 2018, as amended or amended and restated from time to time.

"Commission" means the Securities and Exchange Commission.

"Company" means MIAX Emerald, LLC, a Delaware limited liability company.

"Covered Persons" has the meaning set forth in Section 20.

"Directors" means the Persons elected or appointed to the Board of Directors from time to time in accordance with this LLC Agreement and the By-Laws, in their capacity as managers of the Company.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Exchange Member" means any registered broker or dealer that has been admitted to membership in the national securities exchange operated by the Company. An Exchange Member is not a member of the Company by reason of being an Exchange Member.

"LLC Act" has the meaning set forth in the preamble to this LLC Agreement.

"LLC Agreement" means this Limited Liability Company Agreement of the Company, together with the schedules attached hereto, as amended, restated, supplemented or otherwise modified from time to time.

"LLC Interest" has the meaning set forth in Section 21.

"LLC Member" means Miami International Holdings, Inc., as the sole member of the Company.

"Officer" means an officer of the Company described in Section 10.

"Operating Agreement" has the meaning set forth in the preamble to this LLC Agreement.

"Person" means any individual, corporation, partnership, joint venture, limited liability company, limited liability partnership, association, joint stock company, trust, unincorporated organization or other organization, whether or not a legal entity, and any governmental authority.

"Regulatory Funds" means fees, fines, or penalties derived from the regulatory operations of the Company. "Regulatory Funds" shall not be construed to include revenues derived from listing fees, market data revenues, transaction revenues, or any other aspect of the commercial operations of the Company, even if a portion of such revenues are used to pay costs associated with the regulatory operations of the Company.

B. Rules of Construction

Definitions in this LLC Agreement apply equally to both the singular and plural forms of the defined terms. The words "include" and "including" shall be deemed to be followed by the phrase "without limitation." The terms "herein," "hereof" and "hereunder" and other words of similar import refer to this LLC Agreement as a whole and not to any particular Section, paragraph or subdivision. The Section titles appear as a matter of convenience only and shall not affect the interpretation of this LLC Agreement. All Section, paragraph, clause, Exhibit or Schedule references not attributed to a particular document shall be references to such parts of this LLC Agreement.

SCHEDULE B

LLC Member

Name	Mailing Address	Limited Liability Company Interest
Miami International Holdings, Inc.	7 Roszel Road, 5th Floor Princeton, NJ 08540	100%

SCHEDULE C

Directors as of December 21, 2018

	Name	Classification
1.	Thomas P. Gallagher	Industry
2.	Lindsay L. Burbage	Non-Industry/Independent
3.	Marianne Deane	Non-Industry/Independent
4.	Leslie Florio	Non-Industry/Independent
5.	Kimberly M. Guadagno	Non-Industry/Independent
6.	Joseph M. Kyrillos Jr.	Non-Industry/Independent
7.	John E. McCormac	Non-Industry/Independent
8.	Robert D. Prunetti	Non-Industry/Independent

EXHIBIT A

BY-LAWS OF MIAX EMERALD, LLC

[Separate document]

BY-LAWS
OF
MIAX EMERALD, LLC
(a Delaware limited liability company)

These By-Laws have been established as the By-Laws of **MIAX Emerald, LLC**, a Delaware limited liability company (the "Company"), pursuant to the Amended and Restated Limited Liability Company Agreement of the Company, dated as of December 21, 2018, (as amended from time to time, the "LLC Agreement"), and, together with the LLC Agreement, constitute the limited liability company agreement of the Company within the meaning of the LLC Act (as defined in the LLC Agreement). In the event of any inconsistency between the LLC Agreement and these By-Laws, the provision of the LLC Agreement shall control.

ARTICLE I
Definitions

When used in these By-Laws, unless the context otherwise requires, the terms set forth below shall have the following meanings:

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

(b) An "affiliate" of, or person "affiliated" with a specific person, is a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified.

(c) "Board" or "Board of Directors" means the Board of Directors of the Company.

(d) "broker" shall have the same meaning as in Section 3(a)(4) of the Act.

(e) "Certificate of Formation" means the Certificate of Formation of the Company filed with the office of the Secretary of State of the State of Delaware on January 30, 2018, as amended or amended and restated from time to time.

(f) "Commission" means the Securities and Exchange Commission.

(g) "Company" means MIAX Emerald, LLC, a Delaware limited liability company.

(h) "day" means calendar day.

(i) "dealer" shall have the same meaning as in Section 3(a)(5) of the Act.

(j) "Director" means the persons elected or appointed to the Board of Directors from time to time in accordance with the LLC Agreement and these By-Laws in their capacity as managers of the Company.

(k) "Effective Date" means the date of effectiveness of these By-Laws.

(l) "Exchange" means the national securities exchange operated by the Company.

(m) "Exchange Contract" means a contract that is then listed for trading by the Exchange or that is contemplated by the then current business plan of the Company to be listed for trading by the Exchange within ninety (90) days following such date.

(n) "Exchange Member" means any registered broker or dealer that has been admitted to membership in the national securities exchange operated by the Company. An Exchange Member is not a member of the Company by reason of being an Exchange Member. An Exchange Member will have the status of a "member" of the Exchange as that term is defined in Section 3(a)(3) of the Act.

(o) "Executive Representative" means the person identified to the Company by an Exchange Member as the individual authorized to represent, vote, and act on behalf of the Exchange Member. An Exchange Member may change its Executive Representative or appoint a substitute for its Executive Representative upon giving notice thereof to the Secretary of the Company via electronic process or such other process as the Company may prescribe. An Executive Representative of an Exchange Member or a substitute shall be a member of senior management of the Exchange Member.

(p) "Independent Director" means a Director who has no material relationship with the Company or any affiliate of the Company, or any Exchange Member or any affiliate of any such Exchange Member; *provided*, however, that an individual who otherwise qualifies as an Independent Director shall not be disqualified from serving in such capacity solely because such Director is a Director of the Company or its LLC Member.

(q) "Independent member" means a member of any committee who has no material relationship with the Company or any affiliate of the Company, or any Exchange Member or any affiliate of any such Exchange Member, other than as a committee member. The term Independent member may but is not required to refer to an Independent Director who serves on a committee.

(r) "Industry Director" means a Director who (i) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (ii) is an officer, director (excluding an outside director), or employee of an entity that owns more than 10% of the equity of a broker or dealer, and the broker or dealer accounts for more than 5% of the gross revenues received by the consolidated entity; (iii) owns more than 5% of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed 10% of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (iv) provides professional services to brokers or dealers, and such services constitute 20% or more of the professional revenues received by the Director or 20% or more of the gross revenues received by the Director's firm or partnership; (v) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50% or

more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20% or more of the professional revenues received by the Director or member or 20% or more of the gross revenues received by the Director's or member's firm or partnership; or (vi) has a consulting or employment relationship with or provides professional services to the Company or any affiliate thereof or has had any such relationship or provided any such services at any time within the prior three years.

(s) "Industry member" means a member of any committee or hearing panel who (i) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (ii) is an officer, director (excluding an outside director), or employee of an entity that owns more than 10% of the equity of a broker or dealer, and the broker or dealer accounts for more than 5% of the gross revenues received by the consolidated entity; (iii) owns more than 5% of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed 10% of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (iv) provides professional services to brokers or dealers, and such services constitute 20% or more of the professional revenues received by the Director or 20% or more of the gross revenues received by the Director's firm or partnership; (v) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50% or more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20% or more of the professional revenues received by the Director or member or 20% or more of the gross revenues received by the Director's or member's firm or partnership; or (vi) has a consulting or employment relationship with or provides professional services to the Company or any affiliate thereof or has had any such relationship or provided any such services at any time within the prior three years.

(t) "List of Candidates" means the list of nominees for Member Representative Director positions as nominated by the Member Nominating Committee and amended by petitions filed by Exchange Members. The List of Candidates is submitted to Exchange Members for the final selection of nominees to be elected by the LLC Member to serve as Member Representative Directors.

(u) "LLC Act" means the Delaware Limited Liability Company Act, 6 §18-101, et seq.

(v) "LLC Member" means any person who maintains a direct ownership interest in the Company. The sole LLC Member of the Company shall be Miami International Holdings, Inc.

(w) "Member Nominating Committee" means the Member Nominating Committee elected pursuant to these By-Laws.

(x) "Member Representative Director" means a Director who has been appointed as such to the initial Board of Directors pursuant to Article II, Section 2.5 of these By-Laws, or elected by the LLC Member after having been nominated by the Member Nominating Committee or by an Exchange Member pursuant to these By-Laws and confirmed as the nominee of Exchange Members after majority vote of Exchange Members, if applicable. A Member Representative

Director may, but is not required to be an officer, director, employee, or agent of an Exchange Member.

(y) "Member Representative member" means a member of any committee or hearing panel appointed by the Board who has been elected or appointed after having been nominated by the Member Nominating Committee pursuant to these By-Laws and who is an officer, director, employee, or agent of an Exchange Member.

(z) "Nominating Committee" means the Nominating Committee elected pursuant to these By-Laws.

(aa) "Non-Industry Director" means a Director who is (i) an Independent Director; or (ii) any other individual who would not be an Industry Director.

(bb) "Non-Industry member" means a member of any committee who is (i) an Independent member; or (ii) any other individual who would not be an Industry member.

(cc) "person" shall mean a natural person, partnership, corporation, limited liability company, entity, government, or political subdivision, agency or instrumentality of a government.

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

(ee) "Record Date" means a date at least thirty-five (35) days before the date announced as the date for the annual meeting of the LLC Member and set as the last date on which Exchange Members may petition to add to the List of Candidates and used to determine whether Exchange Members are entitled to vote on the final List of Candidates.

(ff) "registered broker or dealer" means any registered broker or dealer, as defined in Section 3(a)(48) of the Act, that is registered with the Commission under the Act.

(gg) "Regulatory Funds" means fees, fines, or penalties derived from the regulatory operations of the Company. "Regulatory Funds" shall not be construed to include revenues derived from listing fees, market data revenues, transaction revenues, or any other aspect of the commercial operations of the Company, even if a portion of such revenues are used to pay costs associated with the regulatory operations of the Company.

(hh) "Rules" or "Exchange Rules" shall have the same meaning as set forth in Section 3(a)(27) of the Act.

(ii) "statutory disqualification" shall have the same meaning as in Section 3(a)(39) of the Act.

ARTICLE II
Board of Directors

Section 2.1 Powers

(a) The business and affairs of the Company shall be managed by its Board, except to the extent that the authority, powers and duties of such management shall be delegated to a committee or committees of the Board pursuant to these By-Laws or the Rules. The Board of Directors shall have the power to do any and all acts necessary, convenient or incidental to or for the furtherance of the purposes described herein, including all powers, statutory or otherwise. To the fullest extent permitted by applicable law and these By-Laws, the Board may delegate any of its powers to a committee appointed pursuant to Article IV or to any officer, employee or agent of the Company.

(b) The Board shall have the power to adopt, amend or repeal the Rules in accordance with Article IX, Section 9.1.

(c) The Board may adopt such rules, regulations, and requirements for the conduct of the business and management of the Company, not inconsistent with law, the Certificate of Formation, the LLC Agreement or these By-Laws, as the Board may deem proper. A Director shall, in the performance of such Director's duties, be fully protected, to the fullest extent permitted by law, in relying in good faith upon the books of account or reports made to the Company by any of its officers, by an independent certified public accountant, by an appraiser selected with reasonable care by the Board or any committee of the Board or by any agent of the Company, or in relying in good faith upon other records of the Company.

(d) In connection with managing the business and affairs of the Company, the Board shall consider applicable requirements for registration as a national securities exchange under Section 6(b) of the Act, including, without limitation, the requirements that (i) the Rules shall be designed to protect investors and the public interest and (ii) the Company shall be so organized and have the capacity to carry out the purposes of the Act and to enforce compliance by its "members," as that term is defined in Section 3 of the Act (such statutory members being referred to in these By-Laws as "Exchange Members") and persons associated with Exchange Members, with the provisions of the Act, the rules and regulations under the Act, and the Rules of the Exchange. In furtherance of the foregoing, the Board shall, among other things, approve the Exchange's budget which shall be adequate for the operation of the Exchange and for the Exchange to carry out its responsibilities under the Act. In connection therewith, the Board shall approve the Exchange's regulatory budget which shall be adequate for the regulation of the Exchange.

(e) In light of the unique nature of the Company and its operations and in light of the Company's status as a self-regulatory organization, the Board shall, to the fullest extent permitted by applicable law, take into account all factors that the Board deems relevant, including, without limitation, to the extent deemed relevant: (i) the potential impact thereof on the integrity, continuity and stability of the national securities exchange operated by the Company and the other operations of the Company, on the ability to prevent fraudulent and manipulative acts and practices and on investors and the public, and (ii) whether such would promote just and equitable principles of

trade, foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to and facilitating transactions in securities or assist in the removal of impediments to or perfection of the mechanisms for a free and open market and a national market system.

Section 2.2 Composition of the Board

(a) The number of Directors shall be not less than ten (10) including the Chief Executive Officer of the Company. The number of Directors may be fixed from time to time by the LLC Member at any time in its sole and absolute discretion, upon notice to all Directors subject to the minimum number provided for in this Section 2.2(a). No decrease in the number of Directors shall have the effect of shortening the term of any incumbent Director.

(b) At all times the Board of Directors shall consist of one (1) Director who is the Chief Executive Officer of the Company and sufficient numbers of Non-Industry (including Independent), Industry and Member Representative Directors to meet the following composition requirements:

(i) The number of Non-Industry Directors, including at least one Independent Director, shall equal or exceed the sum of the number of Industry Directors and Member Representative Directors elected pursuant to Article II, Section 2.4 or Section 2.5; and

(ii) The number of Member Representative Directors shall be at least twenty (20) percent of the Board.

(c) The Secretary shall collect from each nominee for Director such information as is reasonably necessary to serve as the basis for a determination of the nominee's classification as a Member Representative, Non-Industry or Independent Director, if applicable, and the Secretary shall certify to the Nominating Committee or Member Nominating Committee each nominee's classification, if applicable. Directors shall update the information submitted under this subsection at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information.

(d) A Director may not be subject to a statutory disqualification.

(e) The current Board of Directors consists of the Directors elected by the LLC Member and set forth on Schedule C to the LLC Agreement (the "Current Directors"). In addition to the Current Directors, interim Member Representative Directors shall be elected to the Board of Directors pursuant to the provisions set forth in Article II, Section 2.5 below (the "Interim Member Representative Directors"). The Current Directors and the Interim Member Representative Directors (together, the "Interim Directors") shall not be divided into classes as set forth in Section 2.3(b) and shall serve only until the first annual meeting of the LLC Member following the approval of the Company as a national securities exchange by the Commission, which meeting shall be held within ninety (90) days after the Exchange's application for registration as a national securities exchange is granted.

Section 2.3 Terms of Office

(a) The Board term of the Chief Executive Officer shall expire when such individual ceases to be Chief Executive Officer of the Company.

(b) Each of the Non-Industry and Industry Directors (including Member Representative Directors) shall be divided into three (3) classes, designated Class I, Class II and Class III, which shall be as nearly equal in number and classification as the total number of such Directors then serving on the Board permits. Directors other than the Chief Executive Officer shall serve staggered three-year terms, with the term of office of one class expiring each year. A Director may serve for any number of terms, consecutive or otherwise. In order to commence such staggered three-year terms, Directors in Class I shall hold office until the second annual election of the Board of Directors, Directors in Class II shall initially hold office until the third annual election of the Board of Directors, and Directors in Class III shall initially hold office until the fourth annual election of the Board of Directors. Commencing with the second annual election of the Board of Directors, the term of office for each class of Directors elected at such time shall be three years from the date of their election. Notwithstanding the foregoing, in the case of any new Director as contemplated by Article II, Section 2.2(a), such Director shall be added to a class, as determined by the Board at the time of such Director's initial election or appointment, and shall have an initial term expiring at the same time as the term of the class to which such Director has been added.

Section 2.4 Nomination and Election

(a) The Nominating Committee each year shall nominate Directors for each Director position standing for election at the annual meeting of the LLC Member that year. For positions requiring persons who qualify as Member Representative Directors, the Nominating Committee shall nominate only those persons whose names have been approved and submitted by the Member Nominating Committee, and approved by, if applicable, Exchange Members pursuant to the procedures set forth below in this Section 2.4.

(b) The Member Nominating Committee shall consult with the Nominating Committee, the Chairman and Chief Executive Officer, and shall solicit comments from Exchange Members for the purpose of approving and submitting names of candidates for election to the position of Member Representative Director. A Member Representative Director may, but is not required to be an officer, director, employee, or agent of an Exchange Member.

(c) Not later than sixty (60) days prior to the date announced as the date for the annual meeting of the LLC Member, the Member Nominating Committee shall report to the Nominating Committee and the Secretary the initial nominees for Member Representative Director positions on the Board that have been approved and submitted by the Member Nominating Committee. The Secretary shall promptly notify Exchange Members of those initial nominees. Exchange Members may identify other candidates ("Petition Candidates" for purposes of this Section 2.4) for the Member Representative Director positions by delivering to the Secretary, at least thirty-five (35) days before the date announced as the date for the annual meeting of the LLC Member (the "Record Date" for purposes of this Section 2.4), a written petition, which shall designate the

candidate by name and office and shall be signed by Executive Representatives of ten percent (10%) or more of the Exchange Members. An Exchange Member may endorse as many candidates as there are Member Representative Director positions to be filled. No Exchange Member, together with its affiliates, may account for more than fifty percent (50%) of the signatures endorsing a particular candidate, and any signatures of such Exchange Member, together with its affiliates, in excess of the fifty percent (50%) limitation shall be disregarded.

(d) Each petition for a Petition Candidate must include a completed questionnaire used to gather information concerning Member Representative Director candidates and must be filed with the Company (the Company shall provide the form of questionnaire upon the request of any Exchange Member).

(e) If no valid petitions from Exchange Members are received by the Record Date, the initial nominees approved and submitted by the Member Nominating Committee shall be nominated as Member Representative Directors by the Nominating Committee. If one or more valid petitions from Exchange Members are received by the Record Date, the Secretary shall include such additional nominees, along with the initial nominees nominated by the Member Nominating Committee, on a list of nominees (the "List of Candidates"). Upon completion, the List of Candidates shall be sent by the Secretary to all Exchange Members that were Exchange Members on the Record Date, by any means, including electronic transmission, to confirm the nominees for the Member Representative Director positions. The List of Candidates shall be accompanied by a notice regarding the time and date of an election to be held at least twenty (20) days prior to the annual LLC Member meeting to confirm the Exchange Members' selections of nominees for Member Representative Directors.

(f) With respect to the election held to determine the final nomination of Member Representative Directors, each Exchange Member shall have the right to cast one (1) vote for each available Member Representative Director nomination; provided, however, that any such vote must be cast for a person on the List of Candidates and that no Exchange Member, together with its affiliates, may account for more than twenty percent (20%) of the votes cast for a candidate, and any votes cast by such Exchange Member, together with its affiliates, in excess of such twenty percent (20%) limitation shall be disregarded. The votes shall be cast by written ballot, electronic transmission or any other means as set forth in a notice to the Exchange Members sent by the Company prior to such election. Only votes received prior to 5:00 p.m. Eastern Time on the date of the election shall count for the nomination of a Member Representative Director. The persons on the List of Candidates who receive the most votes shall be selected as the nominees for the Member Representative Director positions to be elected by the LLC Member. Tie votes by the Exchange Members shall be decided by the Member Nominating Committee.

Section 2.5 Interim Directors

(a) The Interim Directors of the Board of Directors shall be appointed by the LLC Member and shall serve until the first annual meeting of the LLC Member following the approval of the Company as a national securities exchange by the Commission, which meeting shall be held within ninety (90) days after the Exchange's application for registration as a national securities

exchange is granted. The Interim Member Representative Directors shall be appointed in accordance with the provisions of this Section 2.5.

(b) The Interim Member Representative Directors shall be appointed by the LLC Member by a consent in writing signed by the LLC Member pursuant to the provisions of Article III, Section 3.3 below and in accordance with this Section 2.5 (the "LLC Member Consent"). At least thirty (30) days prior to the date announced as the effective date for the LLC Member Consent (the "Consent Date"), the LLC Member shall report to the Secretary the initial nominees for Interim Member Representative Director positions on the Board that have been approved and submitted by the LLC Member (the "Initial Interim Member Representative Director Nominees"). At least twenty five (25) days prior to the Consent Date the Secretary shall notify the Exchange Member Applicants of those Initial Interim Member Representative Director Nominees (the "Interim Member Representative Director Nominee Notice"). Exchange Member Applicants may identify other candidates ("Interim Member Representative Director Petition Candidates" for purposes of this Section 2.5) for the Interim Member Representative Director positions by delivering to the Secretary, no later than fourteen (14) days after the date of the Interim Member Representative Director Nominee Notice (the "Interim Record Date" for purposes of this Section 2.5), a written petition, which shall designate the candidate by name and office and shall be signed by Executive Representatives of ten percent (10%) or more of the Exchange Member Applicants. An Exchange Member Applicant may endorse as many candidates as there are Interim Member Representative Director positions to be filled. No Exchange Member Applicant, together with its affiliates, may account for more than fifty percent (50%) of the signatures endorsing a particular candidate, and any signatures of such Exchange Member Applicant, together with its affiliates, in excess of the fifty percent (50%) limitation shall be disregarded. Exchange Member Applicants means persons and entities who have submitted the Initial Documents for membership in the Exchange, who would meet the qualifications for membership based on the information contained in the Initial Documents. Initial Documents means: either the Exchange Membership Pre-Application Survey or the Exchange Participant Connectivity Request Form.

(c) Each petition for an Interim Member Representative Director Petition Candidate must include a completed questionnaire used to gather information concerning Interim Member Representative Director candidates and must be filed with the Company (the Company shall provide the form of questionnaire upon the request of any Exchange Member Applicant).

(d) If no valid petitions from Exchange Member Applicants are received by the Interim Record Date, the Initial Interim Member Representative Director Nominees approved and submitted by the LLC Member pursuant to Section 2.5(b) shall be nominated as Interim Member Representative Directors. If one or more valid petitions from Exchange Member Applicants are received by the Interim Record Date, the Secretary shall include such additional nominees, along with the Initial Interim Member Representative Director Nominees, on a list of nominees (the "List of Interim Member Representative Director Candidates"). Upon completion, the List of Interim Member Representative Director Candidates shall be sent by the Secretary to all Exchange Member Applicants that were Exchange Member Applicants on the Interim Record Date by electronic transmission to confirm the nominees for the Interim Member Representative Director positions. The List of Interim Candidates shall be accompanied by a notice regarding the time and date of an election (the "Interim Election Notice") to be held electronically no sooner than five (5)

days after the Interim Election Notice is delivered to confirm the Exchange Member Applicants' selections of nominees for Interim Member Representative Directors.

(e) With respect to the election held to determine the final nomination of Interim Member Representative Directors, each Exchange Member Applicant shall have the right to cast one (1) vote for each available Interim Member Representative Director nomination; provided, however, that any such vote must be cast for a person on the List of Interim Candidates and that no Exchange Member Applicant, together with its affiliates, may account for more than twenty percent (20%) of the votes cast for a candidate, and any votes cast by such Exchange Member Applicant, together with its affiliates, in excess of such twenty percent (20%) limitation shall be disregarded. The votes shall be cast by electronic transmission as set forth in a notice to the Exchange Member Applicants sent by the Company prior to such election. Only votes received prior to 5:00 p.m. Eastern Time on the date of the election shall count for the nomination of a Member Representative Director. The persons on the List of Interim Candidates who receive the most votes shall be selected as the nominees for the Interim Member Representative Director positions to be elected by the LLC Member pursuant to the Consent on the Consent Date.

(f) In the event of a tie vote for two or more Interim Member Representative Director positions, the tie will be broken by lot in a manner determined by the LLC Member.

Section 2.6 Chairman of the Board

The Board shall appoint one of the Directors to serve as the Chairman of the Board ("Chairman"). The Chairman shall preside at all meetings of the Board at which the Chairman is present; provided, however, that if the Chairman is the Chief Executive Officer he or she shall not participate in executive sessions of the Board. The Chairman shall exercise such other powers and perform such other duties as may be assigned to the Chairman from time to time by the Board. If the Chairman is the Chief Executive Officer, the Board of Directors shall designate a Lead Director from among the Board's Independent Directors to preside over executive sessions of the Board. The Board shall publicly disclose the identity of the Lead Director, if any, and the means by which interested parties may communicate with such Lead Director.

Section 2.7 Vice Chairman

Each year following the annual election of the Directors, the Board may select a Vice Chairman of the Board (the "Vice Chairman") to serve for a term of one year and until a successor is elected or appointed and qualified. The Vice Chairman shall (i) preside over the meetings of the Board in the event the Chairman of the Board is absent or unable to do so, and (ii) exercise such other powers and perform such other duties as are delegated to the Vice Chairman of the Board by the Board.

Section 2.8 Vacancies

(a) Whenever any Director position becomes vacant prior to the election of a successor at the end of such Director's term, whether because of death, disability, disqualification, removal, or resignation, the Nominating Committee shall nominate, and the LLC Member shall elect, a

person satisfying the classification (Industry, Non-Industry, or Independent Director), if applicable, for the directorship as provided in Article II, Section 2.2(b) to fill such vacancy; *provided*, however, that if the remaining term of office of a Member Representative Director at the time of such Director's termination is not more than six months, during the period of vacancy the Board shall not be deemed to be in violation of Article II, Section 2.2(b) by virtue of such vacancy.

(b) If the LLC Member fills a vacancy resulting from a Member Representative Director position becoming vacant prior to the expiration of such Member Representative Director's term, or resulting from the creation of an additional Member Representative Director position required by an increase in the size of the Board, then the LLC Member shall follow the procedures set forth in this Section 2.8(b). In such an event, the Member Nominating Committee shall either (i) recommend an individual to the LLC Member to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the LLC Member from which the LLC Member shall elect the individual to fill such vacancy. The LLC Member shall elect, pursuant to this Section 2.8(b), only individuals recommended by the Member Nominating Committee.

Section 2.9 Removal and Resignation

(a) Except as hereinafter provided, any Director may be removed or expelled with or without cause by the LLC Member, and may be removed by the Board of Directors in the manner provided by Article II, Section 2.9(b) below; provided, however, that any Member Representative Director may only be removed for cause, which shall include, without limitation, such Director being subject to a statutory disqualification.

(b) A Director shall be removed immediately upon a determination by the Board, by a majority vote of the remaining Directors: (i) that the Director no longer satisfies the classification for which the Director was elected; and (ii) that the Director's continued service as such would violate the compositional requirements of the Board set forth in Article II, Section 2.2(b).

(c) Any Director may resign at any time either upon notice of resignation to the Chairman of the Board, the President or the Secretary. Any such resignation shall take effect at the time specified therein or, if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

Section 2.10 Place of Meetings; Mode

Any meeting of the Board may be held at such place, within or without the State of Delaware, as shall be designated in the notice of such meeting, but if no such designation is made, then the meeting will be held at the principal business office of the Company. Members of the Board or any committee of the Board may participate in a meeting of the Board or 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 the meeting.

Section 2.11 Regular Meetings

Regular meetings of the Board may be held, with or without notice, at such time or place as may from time to time be specified in a resolution adopted by the Board.

Section 2.12 Special Meetings

(a) Special meetings of the Board may be called on a minimum of two (2) days' notice to each Director by the Chairman, the Chief Executive Officer or the President, and shall be called by the Secretary upon the written request of three (3) Directors then in office.

(b) The person or persons calling a special meeting of the Board shall fix the time and place at which the meeting shall be held, and such time and place shall be specified in the notice of such meeting. Notice of any special meeting shall be given to each Director at his or her business address or such other address as he or she may have advised the Secretary to use for such purpose. If delivered, notice shall be deemed to be given when delivered to such address or to the Director to be notified. If mailed, such notice shall be deemed to be given five (5) business days after deposit in the United States mail, postage prepaid, of a letter addressed to the appropriate location. Notice may also be given by telephone, electronic transmission or other means not specified in this section, and in each such case shall be deemed to be given when actually received by the Director to be notified.

Section 2.13 Exchange Member Meetings

The Company shall not be required to hold meetings of the Exchange Members.

Section 2.14 Voting, Quorum and Action by the Board

Each Director shall be entitled to one (1) vote. At all meetings of the Board, the presence of a majority of the number of Directors then in office shall constitute a quorum for the transaction of business. If a quorum shall not be present at any meeting of the Board, the Directors present at such meeting may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. The act of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board except as may be otherwise specifically provided by statute, the Certificate of Formation, the LLC Agreement or these By-Laws.

Section 2.15 Presumption of Assent

A Director of the Company who is present at a duly convened meeting of the Board or of a committee of the Board at which action on any corporate matter is taken shall be conclusively presumed to have assented to the action taken unless his or her dissent or election to abstain shall be entered in the minutes of the meeting or unless he or she shall file his or her written dissent or election to abstain to such action with the person acting as the secretary of the meeting before the adjournment of the meeting or shall forward such dissent or election to abstain by registered or

certified mail to the Secretary of the Company immediately after the adjournment of the meeting. Such right to dissent or abstain shall not apply to a Director who voted in favor of such action.

Section 2.16 Action in Lieu of Meeting

Unless otherwise restricted by statute, the Certificate of Formation, the LLC Agreement or these By-Laws, any action required or permitted to be taken at any meeting of the Board or any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing(s) or electronic transmission(s) are filed with the minutes of proceedings of the Board or the committee.

Section 2.17 Waiver of Notice

(a) Whenever notice is required to be given by law, the Certificate of Formation, the LLC Agreement or these By-Laws, a waiver thereof by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board, or members of a committee, need be specified in any waiver of notice.

(b) Attendance of a person at a meeting 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 because the meeting is not lawfully called or convened.

Section 2.18 Compensation of Board and Committee Members

The Board may provide for reasonable compensation of the Chairman, the Directors and the members of committees. The Board may also provide for reimbursement of reasonable expenses incurred by such persons in connection with the business of the Company.

Section 2.19 Interpretation of By-Laws

The Board shall have the power to interpret these By-Laws and any interpretation made by it shall be final and conclusive.

Section 2.20 Conflicts of Interest; Contracts and Transactions Involving Directors

(a) A Director or a member of any committee may not participate in the consideration or decision of any matter relating to a particular Exchange Member, company, or individual if such Director or committee member has a material interest in, or a professional, business, or personal relationship with, that Exchange Member, company, or individual, or if such participation shall create an appearance of impropriety. In any such case, the Director or committee member shall recuse himself or herself or shall be disqualified. If a member of the Board or any committee is recused from consideration of a matter, any decision on the matter shall be by a vote of a majority of the remaining members of the Board or applicable committee.

(b) No contract or transaction between the Company and one or more of its Directors or officers, or between the Company and any other corporation, partnership, association, or other organization in which one or more of its Directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason if: (i) the material facts pertaining to such Director's or officer's relationship or interest and 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 vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum; or (ii) the material facts are disclosed or become known to the Board or committee after the contract or transaction is entered into, and the Board or committee in good faith ratifies the contract or transaction by the affirmative vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum.

ARTICLE III
The LLC Member

Section 3.1 Annual Meeting; Election of Directors and Other Matters

(a) The annual meeting of the LLC Member shall be held at such place and time as determined by the Board for the purpose of electing Directors and members of the Nominating Committee and Member Nominating Committee, and for conducting such other business as may properly come before the meeting. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to the LLC Member not less than ten (10) nor more than sixty (60) days before the date of the meeting.

(b) The Interim Directors, including the Interim Member Representative Directors, shall be appointed prior to the Company's commencement of operations as an Exchange. The first annual meeting of the LLC Member shall be held within ninety (90) days after the Company's application for registration as a national securities exchange is granted.

Section 3.2 Special Meetings

Special meetings of the LLC Member, for any purpose or purposes, may be called by the Chairman, the Board, the Chief Executive Officer or the President, and shall be called by the Secretary at the request in writing of the LLC Member. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given to the LLC Member not less than ten (10) nor more than sixty (60) days before the date of the meeting. Business transacted at any special meeting of the LLC Member shall be limited to the purpose(s) stated in the notice of the meeting.

Section 3.3 Action in Lieu of Meeting

Any action upon which a vote of the LLC Member 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 LLC Member.

Section 3.4 Assignment

The LLC Member may not transfer or assign in whole or in part its limited liability company interest in the Company to any entity, unless such transfer or assignment shall be filed with and approved by the Commission under Section 19 of the Exchange Act and the rules promulgated thereunder.

ARTICLE IV
Committees

Section 4.1 Designation of Committees

(a) **Committees of the Board.** The committees of the Board shall consist of a Compensation Committee, an Audit Committee, a Regulatory Oversight Committee, an Appeals Committee, and such other committees as may be provided in these By-Laws or the Rules or as may be from time to time established by the Board. Committees shall have such authority as is vested in them by these By-Laws or the Rules, or as is delegated to them by the Board. All committees are subject to the control and supervision of the Board.

(b) **Committees of the Exchange.** The Exchange also shall have such other committees as may be provided in these By-Laws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these By-Laws, the Rules or the resolution of the Board establishing any such other committee, the Chairman 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 thereof. Except as may be otherwise provided in these By-Laws or the Rules, the Chairman or his or her designee may, at any time, with or without cause, remove any member of any such Exchange committee.

Section 4.2 Board Committees - Appointment and Removal; Vacancies; Term

(a) Except as may be otherwise provided in these By-Laws, the Rules or the resolution of the Board establishing any committee, the Chairman, with the approval of the Board, shall appoint, consistent with these By-Laws, the members of all committees of the Board, and the Chairman may, at any time, with or without cause, remove any member of a committee so appointed, with the approval of the Board. Each committee shall be comprised of at least three (3) people and except as provided in these By-Laws may include persons who are not members of the Board; provided, however, that such committee members who are not also members of the Board shall only participate in committee actions to the extent permitted by law. In appointing members to committees of the Board, the Chairman is responsible for determining that any such committee meets the composition requirements set forth in this Article IV.

(b) Upon request of the Secretary, each prospective committee member who is not a Director shall provide to the Secretary such information as is reasonably necessary to serve as the basis for a determination of the prospective committee member's classification as an Industry, Non-Industry, or Independent member. The Secretary shall certify to the Board each prospective

committee member's classification. Such committee members shall update the information submitted under this subsection at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information. A committee member may not be subject to a statutory disqualification.

(c) The term of office of a committee member shall terminate immediately upon a determination by the Board, by a majority vote of the Directors, (i) that the committee member no longer satisfies the classification for which the committee member was selected; and (ii) that the committee member's continued service as such would violate the compositional requirements of such committee set forth in this Article IV.

(d) Any vacancy occurring in a committee shall be filled by the Chairman for the remainder of the term, with the approval of the Board.

(e) Except as otherwise provided by the By-Laws, members of a committee shall hold office for a one-year period.

Section 4.3 Conduct of Proceedings

Except as otherwise provided in these By-Laws, the Rules, the Charter of the committee or by the Board by resolution, each committee may adopt its own rules of procedure and may meet at stated times or on such notice as such committee may determine. 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 II of these By-Laws. Each committee shall keep regular minutes of its meetings and report the same to the Board when required.

Section 4.4 Voting, Quorum and Action by Committees

Each committee member shall be entitled to one (1) vote. Unless otherwise required by the By-Laws, the Rules or the Charter of the committee, the presence of a majority of the number of committee members serving on a committee shall constitute a quorum for the transaction of business of such committee. If a quorum shall not be present at any meeting of a committee, the committee members present at such meeting may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. The act of a majority of the committee members present at any meeting at which there is a quorum shall be the act of such committee except as may be otherwise specifically provided by statute or these By-Laws, the Rules or the Charter of the committee.

Section 4.5 Specified Board Committees

(a) **Compensation Committee**. The Chairman, with the approval of the Board, shall appoint a Compensation Committee consisting of Non-Industry Directors. The Compensation Committee shall consider and recommend compensation policies, programs, and practices for officers and other employees of the Company.

(b) **Audit Committee.** The Chairman, with the approval of the Board, shall appoint an Audit Committee consisting of Directors. A majority of the Audit Committee members shall be Non-Industry Directors. A Non-Industry Director shall serve as Chairman of the Audit Committee. The Audit Committee shall perform the following primary functions, as well as such other functions as may be specified in the charter of the Audit Committee: (i) provide oversight over the Company's financial reporting process and the financial information that is provided to the LLC Member and others; (ii) provide oversight over the systems of internal controls established by management and the Board and the Company's legal and compliance process; and (iii) direct and oversee all the activities of the Company's internal audit function, including but not limited to management's responsiveness to internal audit recommendations. The Audit Committee shall have exclusive authority to: (i) hire or terminate the head of the Company's Internal Audit Department; (ii) determine the compensation of the head of the Internal Audit Department; and (iii) determine the budget for the Internal Audit Department. The Internal Audit Department and its head shall report directly to the Audit Committee. The Audit Committee may, in its discretion, direct that the Internal Audit Department also report to senior management of the Company on matters the Audit Committee deems appropriate and may request that senior management of the Company perform such operational oversight as necessary and proper, consistent with preservation of the independence of the internal audit function.

(c) **Regulatory Oversight Committee.** The Chairman, with the approval of the Board, shall appoint a Regulatory Oversight Committee consisting of Non-Industry Directors. The Regulatory Oversight Committee shall oversee the adequacy and effectiveness of Exchange's regulatory and self-regulatory organization responsibilities, and shall be responsible for assessing the Exchange's regulatory performance and recommending compensation and personnel actions involving the Chief Regulatory Officer and senior regulatory personnel to the Board's Compensation Committee for action. The Regulatory Oversight Committee shall also assist the Board and committees of the Board in reviewing the regulatory plan and the overall effectiveness of Exchange's regulatory functions. In furtherance of its functions, the Regulatory Oversight Committee (i) shall review the Exchange's regulatory budget, which shall be approved by the Board of Directors, and shall specifically inquire into the adequacy of resources available in the budget for regulatory activities; and (ii) shall meet regularly with the Chief Regulatory Officer in executive session.

(d) **Appeals Committee.** The Chairman, with the approval of the Board, shall appoint an Appeals Committee. The Appeals Committee shall preside over all appeals related to disciplinary and adverse action determinations in accordance with the Exchange Rules. The Appeals Committee shall consist of one Independent Director, one Industry Director, and one Member Representative Director. If the Independent Director recuses himself or herself from an appeal, due to a conflict of interest or otherwise, such Independent Director may be replaced by a Non-Industry Director for purposes of the applicable appeal if there is no other Independent Director able to serve as the replacement.

(e) **Executive Committee.** The Chairman, with the approval of the Board, may appoint an Executive Committee consisting of Directors, which shall, to the fullest extent permitted by Delaware law and other applicable law, have and be permitted to exercise all the powers and authority of the Board in the management of the business and affairs of the Company

between meetings of the Board. The number of Non-Industry Directors on the Executive Committee shall equal or exceed the number of Industry Directors on the Executive Committee. The percentage of Independent Directors on the Executive Committee shall be at least as great as the percentage of Independent Directors on the whole Board, and the percentage of Member Representative Directors on the Executive Committee shall be at least as great as the percentage of Member Representative Directors on the whole Board.

(f) **Finance Committee**. The Chairman, with the approval of the Board, may appoint a Finance Committee consisting of Directors. A majority of the Finance Committee members shall be Non–Industry Directors. The Finance Committee shall advise the Board with respect to the oversight of the financial operations and conditions of the Company, including recommendations for Company's annual operating and capital budgets.

Section 4.6 Quality of Markets Committee.

The Chairman, with the approval of the Board, shall appoint a Quality of Markets Committee. The Quality of Markets Committee shall provide advice and guidance to the Board on issues relating to the fairness, integrity, efficiency and competitiveness of the information, order handling and execution mechanisms of the Exchange from the perspective of investors, both individual and institutional, retail firms, market making firms, Exchange listed companies and other market participants. The Quality of Markets Committee shall include broad representation of participants in the Exchange, including investors, market makers, integrated retail firms and order entry firms. The Quality of Markets Committee shall include a number of Member Representative members that is equal to at least 20 percent of the total number of members of the Quality of Markets Committee. The number of Non-Industry members of the Quality of Markets Committee shall equal or exceed the sum of the number of Industry members and Member Representative members.

Section 4.7 Business Conduct Committee

There shall be a Business Conduct Committee which shall not be a Board Committee but shall be a committee of the Exchange. The Chairman shall appoint a Business Conduct Committee composed of such number of Exchange Members and individuals who are not Exchange Members as the Chairman shall deem necessary, none of whom shall be Directors. The Business Conduct Committee or any panel thereof shall include at least one officer, director or employee of an Exchange Member.

The jurisdiction, function and powers shall be exercised by the Business Conduct Committee in accordance with the provisions set forth in the Exchange Rules.

ARTICLE V
Nominating Committees

Section 5.1 Election of Nominating Committee and Member Nominating Committee

The Nominating Committee and the Member Nominating Committee shall each be elected on an annual basis by vote of the LLC Member. The LLC Member shall appoint the initial Nominating Committee and Member Nominating Committee consistent with the compositional requirements of this Article V within fifteen (15) days after the Exchange's application for registration as a national securities exchange is granted. Because the first annual meeting of the LLC Member is intended to be held within ninety (90) days after the Exchange's application for registration as a national securities exchange is granted, the initial Nominating Committee and Member Nominating Committee shall serve until the second annual meeting of the LLC Member. Not later than sixty (60) days prior to the date announced as the date for each annual meeting of the LLC Member commencing with the second annual meeting of the LLC Member, the Nominating Committee and the Member Nominating Committee shall nominate candidates to serve on the succeeding year's Nominating Committee and Member Nominating Committee, as applicable, and notify the Secretary of such nominees. Such candidates shall be voted on by the LLC Member at the annual meeting of the LLC Member. Additional candidates for the Member Nominating Committee may be nominated and elected pursuant to the same process as provided for in Article II, Section 2.4.

Section 5.2 Nominating Committee

The Nominating Committee shall nominate candidates for election to the Board at the annual LLC Member meeting and all other vacant or new Director positions on the Board. The Nominating Committee, in making such nominations, is responsible for ensuring that candidates meet the compositional requirements of Article II, Section 2.2(b). The number of Non-Industry members on the Nominating Committee shall equal or exceed the number of Industry members on the Nominating Committee. A Nominating Committee member may not simultaneously serve on the Nominating Committee and the Board, unless such member is in his or her final year of service on the Board, and following that year, that member may not stand for election to the Board until such time as he or she is no longer a member of the Nominating Committee. No more than one (1) member of the Nominating Committee shall be a current Director, and such Director shall be a Non-Industry Director.

Section 5.3 Member Nominating Committee

The Member Nominating Committee shall nominate candidates for each Member Representative Director position on the Board that is to be elected by Exchange Members or the LLC Member under the terms of these By-Laws. Each member of the Member Nominating Committee shall be a Member Representative member and shall not be required to be a Director of the Company.

ARTICLE VI
Officers, Agents and Employees

Section 6.1 General

The officers of the Company shall include a Chief Executive Officer, a President, a Chief Financial Officer, a Chief Regulatory Officer, a Secretary, a Treasurer, and such other officers as in the Board's opinion are desirable for the conduct of the business of the Company, including but not limited to a Vice Chairman. Any two or more offices may be held by the same person, except that the offices of the President and Secretary may not be held by the same person. No person that is subject to any statutory disqualification may be an officer of the Company.

Section 6.2 Appointment and Tenure

Each officer of the Company shall be appointed by the Board on an annual basis, and shall hold office until his or her successor is appointed and qualified or until his or her earlier death, disability, disqualification, removal or resignation. An officer may serve for any number of terms, consecutive or otherwise.

Section 6.3 Resignation and Removal of Officers; Vacancies

(a) Any officer may resign at any time upon notice of resignation to the Chairman and Chief Executive Officer, the President, or the Secretary. Any such resignation shall take effect upon receipt of such notice or at any later time specified therein, or if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

(b) Any officer of the Company may be removed, with or without cause, by the Board. Such removal shall be without prejudice to the contractual rights of the affected officer, if any, with the Company.

(c) Vacancies in any office of the Company may be filled for the unexpired term by the Board.

Section 6.4 Compensation

The Compensation of the Chairman, the Vice Chairman and the Chief Executive Officer shall be fixed by the Compensation Committee. The salaries of all other officers and agents of the Company shall be fixed by the Chief Executive Officer, in consultation with the Compensation Committee.

Section 6.5 Powers and Duties; Delegation

Each of the officers of the Company shall, unless otherwise ordered by the Board, have such powers and duties as customarily pertain to the respective office, and such further powers and duties as from time to time may be conferred by the Board, or by an officer delegated such

authority by the Board. The Board may delegate the duties and powers of any officer of the Company to any other officer or to any Director for a specified period of time and for any reason that the Board may deem sufficient.

Section 6.6 Chief Executive Officer

The Chief Executive Officer shall be the chief executive officer of the Company, shall have general supervision over the business and affairs of the Company and shall serve at the pleasure of the Board. The Chief Executive Officer shall have all powers and duties usually incident to the office of the Chief Executive Officer, except as specifically limited by a resolution of the Board. The Chief Executive Officer shall exercise such other powers and perform such other duties as may be assigned to the Chief Executive Officer from time to time by the Board.

Section 6.7 President

The President shall, in the absence of the Chairman, the Vice Chairman and Chief Executive Officer, preside at all meetings of the Board at which the President is present. The President shall have general supervision over the operations of the Company. The President shall have all powers and duties usually incident to the office of the President, except as specifically limited by a resolution of the Board. The President shall exercise such other powers and perform such other duties as may be assigned to the President from time to time by the Board.

Section 6.8 Vice President

The Board shall appoint one or more Vice Presidents. In the absence or disability of the President or if the office of President becomes vacant, the Vice Presidents in the order determined by the Board, or if no such determination has been made, in the order of their seniority, shall perform the duties and exercise the powers of the President, subject to the right of the Board at any time to extend or restrict such powers and duties or to assign them to others. Any Vice President may have such additional designations in such Vice President's title as the Board may determine. The Vice Presidents shall generally assist the President in such manner as the President shall direct. Each Vice President shall exercise such other powers and perform such other duties as may be assigned to such Vice President from time to time by the Board, the Chief Executive Officer or the President. The term "Vice President" used in this Section shall include the positions of Executive Vice President, Senior Vice President, and Vice President.

Section 6.9 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 Company's funds and securities; shall keep full and accurate all books and accounts of the Company 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 Company as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Company 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 Company.

Section 6.10 Chief Regulatory Officer

An officer of the Company with the position of Vice President, Senior Vice President or Executive Vice President shall be designated as the Chief Regulatory Officer of the Company. The Chief Regulatory Officer shall have general supervision of the regulatory operations of the Company, including responsibility for overseeing the Company's surveillance, examination, and enforcement functions and for administering any regulatory services agreements with another self-regulatory organization to which the Company is a party. The Chief Regulatory Officer shall report to the Regulatory Oversight Committee. The Chief Regulatory Officer shall meet with the Regulatory Oversight Committee of the Company in executive session at regularly scheduled meetings of such committee, and at any time upon request of the Chief Regulatory Officer or any member of the Regulatory Oversight Committee. The Chief Regulatory Officer may, but is not required to, also serve as the General Counsel of the Company.

Section 6.11 Secretary

The Secretary shall act as Secretary of all meetings of the Board at which the Secretary is present, shall record all the proceedings of all such meetings in a book to be kept for that purpose, shall have supervision over the giving and service of notices of the Company, and shall have supervision over the care and custody of the books and records of the Company. The Secretary shall be empowered to affix the Company's seal, if any, to documents, the execution of which on behalf of the Company under its seal is duly authorized, and when so affixed, may attest the same. The Secretary shall have all powers and duties usually incident to the office of Secretary, except as specifically limited by a resolution of the Board. The Secretary shall exercise such other powers and perform such other duties as may be assigned to the Secretary from time to time by the Board, the Chief Executive Officer or the President.

Section 6.12 Assistant Secretary

In the absence of the Secretary or in the event of the Secretary's inability or refusal to act, any Assistant Secretary, approved by the Board, shall exercise all powers and perform all duties of the Secretary. An Assistant Secretary shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Secretary from time to time by the Board or the Secretary.

Section 6.13 Treasurer

The Treasurer shall have general supervision over the care and custody of the funds and over the receipts and disbursements of the Company and shall cause the funds of the Company to be deposited in the name of the Company in such banks or other depositories as the Board may designate. The Treasurer shall have supervision over the care and safekeeping of the securities of the Company. The Treasurer shall have all powers and duties usually incident to the office of Treasurer except as specifically limited by a resolution of the Board. The Treasurer shall exercise

such other powers and perform such other duties as may be assigned to the Treasurer from time to time by the Board, the Chief Executive Officer or the President.

Section 6.14 Assistant Treasurer

In the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, any Assistant Treasurer, approved by the Board, shall exercise all powers and perform all duties of the Treasurer. An Assistant Treasurer shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Treasurer from time to time by the Board or the Treasurer.

ARTICLE VII
Indemnification and Insurance

Section 7.1 Right to Indemnification

Each person who was or is made a party or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she or a person of whom he or she is the legal representative is or was a director or an officer of the Company or is or was serving at the request of the Company as a director, officer, employee or agent of any other corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to any employee benefit plan (hereinafter an "indemnitee"), whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Company to the fullest extent authorized by the LLC Act, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Company to provide broader indemnification rights than the LLC Act permitted the Company to provide prior to such amendment), against all expense, liability and loss (including, without limitation, attorneys' fees, judgments, fines, excise taxes or penalties under the Employee Retirement Income Security Act of 1974, as amended, and amounts paid or to be paid in settlement) reasonably incurred by such indemnitee in connection therewith; provided, however, that except as provided in Section 7.3 with respect to proceedings seeking to enforce rights to indemnification, the Company shall indemnify any such indemnitee seeking indemnification in connection with a proceeding (or part thereof) initiated by such indemnitee only if such proceeding (or part thereof) was authorized by the Board of Directors.

Section 7.2 Right to Advancement of Expenses

The right to indemnification conferred in Section 7.1 shall include the right to be paid by the Company the expenses (including attorneys' fees) incurred in defending any such proceeding in advance of its final disposition (hereinafter an "advancement of expenses"); provided, however, that, if the LLC Act requires, an advancement of expenses incurred by an indemnitee in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Company of an undertaking (hereinafter an "undertaking"), by or

on behalf of such indemnitee, 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 (hereinafter a "final adjudication") that such indemnitee is not entitled to be indemnified for such expenses under this Section 7.2 or otherwise.

Section 7.3 Right of Indemnitee to Bring Suit

If a claim under Section 7.1 or Section 7.2 is not paid in full by the Company within thirty (30) days after a written claim has been received by the Company, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty (20) days, the indemnitee may at any time thereafter bring suit against the Company to recover the unpaid amount of the claim. If successful in whole or in part in any such suit, or in a suit brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the indemnitee shall also be entitled to be paid the expense of prosecuting or defending such suit.

In (i) any suit brought by the indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the indemnitee to enforce a right of an advancement of expenses) it shall be a defense that, and (ii) in any suit brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the Company shall be entitled to recover such expenses upon a final adjudication that, the indemnitee has not met any applicable standard for indemnification set forth in the LLC Act. Neither the failure of the Company (including its Board of Directors, independent legal counsel or the LLC Member) to have made a determination prior to the commencement of such action that indemnification of the indemnitee is proper in the circumstances because the indemnitee has met the applicable standard of conduct set forth in the Act, nor an actual determination by the Company (including its Board of Directors, independent legal counsel or the LLC Member) that the indemnitee has not met such applicable standard of conduct, shall create a presumption that the indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the indemnitee, be a defense to such suit. In any suit brought by the indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the Company to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article VII or otherwise shall be on the Company.

Section 7.4 Non-Exclusivity of Rights

The right to indemnification and the advancement of expenses conferred in this Article VII shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, provision of the LLC Agreement, provision of these By-Laws, agreement, vote of the LLC Member or disinterested directors or otherwise.

Section 7.5 Insurance

The Company may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Company or another corporation, partnership, joint venture, trust

or other enterprise against any expense, liability or loss, whether or not the Company would have the power to indemnify such person against such expense, liability or loss under the law.

Section 7.6 Indemnification of Employees and Agents of the Company

The Company may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification, and rights to the advancement of expenses, to any employee or agent of the Company to the fullest extent of the provisions of this Article VII with respect to the indemnification and advancement of expenses of directors and officers of the Company.

Section 7.7 Contract Rights

The rights to indemnification and to the advancement of expenses conferred in Section 7.1 and Section 7.2 shall be contract rights and such rights shall continue as to an indemnitee who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the indemnitee's heirs, executors and administrators.

Section 7.8 Company Not Liable

Except as provided in the Exchange Rules, the Company shall not be liable for any loss or damage sustained by any current or former Exchange Member growing out of the use or enjoyment by such Exchange Member of the facilities afforded by the Company (or any predecessor or successor thereof) or its subsidiaries.

ARTICLE VIII
Amendments; Emergency By-Laws

Section 8.1 By the LLC Member or Board

These By-Laws may be altered, amended, or repealed, or new By-Laws may be adopted, (i) by the written consent of the LLC Member, or (ii) at any regular or special meeting of the Board by a resolution adopted by the Board.

Section 8.2 Emergency By-Laws

The Board may adopt emergency By-Laws subject to repeal or change by action of the LLC Member which shall, notwithstanding any different provision of law, the Certificate of Formation, the LLC Agreement or these By-Laws, be operative during any emergency resulting from any nuclear or atomic disaster, an attack on the United States or on a locality in which the Company conducts its business or customarily holds meetings of the Board, any catastrophe, or other emergency condition, as a result of which a quorum of the Board or a committee thereof cannot readily be convened for action. Such emergency By-Laws may make any provision that may be practicable and necessary under the circumstances of the emergency.

Section 8.3 Authority to Take Action Under Extraordinary Market Conditions

The Board, or such person or persons as may be designated by the Board, in the event of extraordinary market conditions, shall have the authority to take any action regarding:

(a) the trading in or operation of the national securities exchange operated by the Company or any other organized securities markets that may be operated by the Company, the operation of any automated system owned or operated by the Company, and the participation in any such system or any or all persons or the trading therein of any or all securities; and

(b) the operation of any or all systems of Exchange Members, if, in the opinion of the Board or the person or persons hereby designated, such action is necessary or appropriate for the protection of investors or the public interest or for the orderly operation of the marketplace or the system.

Section 8.4 Commission Approval

Before any amendment to, alteration or repeal of any provision of the By-Laws of the Company under this Article VIII 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 Commission, then the proposed changes to the By-Laws of the Company shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

ARTICLE IX
Exchange Authorities

Section 9.1 Rules

The Board, acting in accordance with the terms of these By-Laws and the Rules, shall be vested with all powers necessary for the government of the Company as an "exchange" within the meaning of the Act. To promote and enforce just and equitable principles of trade and business, to maintain high standards of commercial honor and integrity among Exchange Members, to collaborate with governmental and other agencies in the promotion of fair practices and the elimination of fraud, and in general to carry out the purposes of the Company and of the Act, the Board is hereby authorized to adopt such rules and such amendments thereto as it may, from time to time, deem necessary or appropriate. If any such rules or amendments thereto are approved by the Commission or otherwise become effective as provided in the Act, they shall become operative Exchange Rules as of the date of Commission approval or effectiveness under the Act unless a later operative date is declared by the Company. The Board is hereby authorized, subject to the provisions of these By-Laws and the Act, to administer, enforce, interpret, issue exemptions from, suspend, or cancel any Rules adopted hereunder.

Section 9.2 Disciplinary Proceedings

(a) The Board is authorized to establish procedures relating to disciplinary proceedings involving Exchange Members and their associated persons.

(b) The Board is authorized to impose appropriate sanctions applicable to Exchange Members, including censure, fine, suspension, or expulsion from membership, suspension or bar from being associated with all Exchange Members, limitation of activities, functions, and operations of an Exchange Member, or any other fitting sanction, and to impose appropriate sanctions applicable to persons associated with Exchange Members, including censure, fine, suspension, or barring a person associated with an Exchange Member from being associated with all Exchange Members, limitation of activities, functions, and operations of a person associated with an Exchange Member, or any other fitting sanction, for:

(i) a breach by an Exchange Member or a person associated with an Exchange Member of any covenant with the Company or its LLC Member;

(ii) violation by an Exchange Member or a person associated with an Exchange Member of any of the terms, conditions, covenants, and provisions of the By-Laws, the Rules, or the federal securities laws, including the rules and regulations adopted thereunder;

(iii) failure by an Exchange Member or person associated with an Exchange Member to: (A) submit a dispute for arbitration as may be required by the Rules; (B) appear or produce any document in the Exchange Member's or person's possession or control as directed pursuant to the Rules; (C) comply with an award of arbitrators properly rendered, where a timely motion to vacate or modify such award has not been made pursuant to applicable law or where such a motion has been denied; or (D) comply with a written and executed settlement agreement obtained in connection with an arbitration or mediation submitted for disposition; or

(iv) failure by an Exchange Member or person associated with an Exchange Member to adhere to any ruling, order, direction, or decision of or to pay any sanction, fine, or costs imposed by the Board or any entity to which the Board has delegated its powers.

Section 9.3 Membership Qualifications

(a) The Board shall have authority to adopt rules and regulations applicable to Exchange Members, applicants seeking to become Exchange Members, and persons associated with applicants or Exchange Members, establishing specified and appropriate standards with respect to the training, experience, competence, financial responsibility, operational capability, and such other qualifications as the Board finds necessary or desirable.

(b) The Board may from time to time make such changes in such rules, regulations, and standards as it deems necessary or appropriate.

(c) Uniform standards for regulatory and other access issues, such as admission to membership and conditions to becoming an Exchange market maker, shall be promulgated and applied on a consistent basis, and the Company shall institute safeguards to ensure fair and evenhanded access to all of its services and facilities.

Section 9.4 Fees, Dues, Assessments, and Other Charges

The Board shall have authority to fix and levy the amount of fees, dues, assessments, and other charges to be paid by Exchange Members and issuers and any other persons using any facility or system that the Company operates or controls; provided, however, that such fees, dues, assessments, and other charges shall be equitably allocated among Exchange Members and any other persons using any facility or system that the Company operates or controls. Any Regulatory Funds will not be used for non-regulatory purposes or distributed to the LLC Member, but rather, shall be applied to fund the legal and regulatory operations of the Company (including surveillance and enforcement activities), or, as the case may be, shall be used to pay restitution and disgorgement of funds intended for customers.

ARTICLE X
Miscellaneous Provisions

Section 10.1 Operational Date of Exchange

The Company has been formed in anticipation of its registration by the Commission as a national securities exchange. During the period between formation and the first date on which the Company commences operating a national securities exchange (the "Operational Date"):

(a) references in the Agreement and By-Laws to "the national securities exchange operated by the Company" shall be construed as references to "the national securities exchange to be operated by the Company"; and

(b) the Board of Directors of the Company may appoint members of the committees to be established under the By-Laws, but shall not be required to appoint all such committee members until the date immediately prior to the Operational Date.

Section 10.2 Fiscal Year

The fiscal year of the Company shall be as determined from time to time by the Board.

Section 10.3 Participation in Board and Committee Meetings

All meetings of the Board (and any committees of the Company) pertaining to the self-regulatory function of the Company (including disciplinary matters) shall be closed to all persons other than members of the Board, officers, staff, counsel or other advisors whose participation is necessary or appropriate to the proper discharge of such regulatory functions and any representatives of the Commission. In no event shall members of the Board of Directors of Miami International Holdings, Inc. who are not also members of the Board, or any officers, staff, counsel or advisors of Miami International Holdings, Inc. who are not also officers, staff, counsel or advisors of the Company (or any committees of the Company), be allowed to participate in any meetings of the Board (or any committee of the Company) pertaining to the self-regulatory function of the Company (including disciplinary matters).

Section 10.4 Books and Records; Confidentiality of Information and Records Relating to SRO Function

The books and records of the Company shall be maintained at a location within the United States. All books and records of the Company reflecting confidential information pertaining to the self-regulatory function of the Company (including but not limited to disciplinary matters, trading data, trading practices, and audit information) shall be retained in confidence by the Company and its personnel and will not be used by the Company for any non-regulatory purposes and shall not be made available to any person (including, without limitation, any Exchange Member) other than to personnel of the Commission, and those personnel of the Company, members of committees of the Company, members of the Board, hearing officers and other agents of the Company to the extent necessary or appropriate to properly discharge the self-regulatory responsibilities of the Company.

Section 10.5 Execution of Instruments, Contracts, etc.

(a) All checks, drafts, bills of exchange, notes, or other obligations or orders for the payment of money shall be signed in the name of the Company by such officer or officers or person or persons as the Board, or a duly authorized committee thereof, may from time to time designate. Except as otherwise provided by law, the Board, any committee given specific authority in the premises by the Board, or any committee given authority to exercise generally the powers of the Board during intervals between meetings of the Board may authorize any officer, employee, or agent, in the name of and on behalf of the Company, to enter into or execute and deliver deeds, bonds, mortgages, contracts, and other obligations or instruments, and such authority may be general or confined to specific instances.

(b) All applications, written instruments, and papers required by any department of the United States government or by any state, county, municipal, or other governmental authority may be executed in the name of the Company by any officer of the Company, or, to the extent designated for such purpose from time to time by the Board, by an employee or agent of the Company. Such designation may contain the power to substitute, in the discretion of the person named, one or more other persons.

Section 10.6 Power to Vote Stock

Unless otherwise instructed by the Board, the Chairman or the Chief Executive Officer of the Company shall have the power and authority on behalf of the Company to attend and to vote at any meeting of the stockholders, partners or equity holders of any corporation, partnership or any other entity in which the Company may hold stock, partnership or other equity interests, as the case may be, and may exercise on behalf of the Company any and all of the rights and powers incident to the ownership of such stock, partnership or other equity interest at such meeting, and shall have the power and authority to execute and deliver proxies, waivers and consents on behalf of the Company in connection with the exercise by the Company of the rights and powers incident to the ownership of such stock, partnership or other equity interest. The Board may from time to time confer like powers upon any other person or persons.

Section 10.7 Severability

If any provision of these By-Laws, or the application of any provision of these By-Laws to any person or circumstances, is held invalid, the remainder of these By-Laws and the application of such provision to other persons or circumstances shall not be affected.

Effective Date: December 21, 2018

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Form **LLC-5.5**	**Illinois** **Limited Liability Company Act** **Articles of Organization**	**FILE # 07506945**
Secretary of State Jesse White Department of Business Services Limited Liability Division www.cyberdriveillinois.com	**Filing Fee:** $150 **Approved By:** TLB	**FILED** **JAN 25 2019** **Jesse White** **Secretary of State**

1. Limited Liability Company Name: MIAX PRODUCTS, LLC

2. Address of Principal Place of Business where records of the company will be kept:
   7 ROSZEL ROAD, SUITE 5-A

   PRINCETON, NJ 08540

3. The Limited Liability Company has one or more members on the filing date.

4. Registered Agent's Name and Registered Office Address:

   CT CORPORATION SYSTEM
   208 S LA SALLE ST STE 814
   CHICAGO, IL 60604-1135

5. Purpose for which the Limited Liability Company is organized:
   "The transaction of any or all lawful business for which Limited Liability Companies may be organized under this Act."

6. The LLC is to have perpetual existence.

7. Name and business addresses of all the managers and any member having the authority of manager:

   MIAMI INTERNATIONAL HOLDINGS, INC.
   7 ROSZEL ROAD, SUITE 5-A
   PRINCETON, NJ 08540

8. **Name and Address of Organizer**
   I affirm, under penalties of perjury, having authority to sign hereto, that these Articles of Organization are to the best of my knowledge and belief, true, correct and complete.

   Dated: JANUARY 25, 2019

   BARBARA J. COMLY
   7 ROSZEL ROAD, SUITE 5-A
   PRINCETON, NJ 08540

This document was generated electronically at www.cyberdriveillinois.com

LIMITED LIABILITY COMPANY AGREEMENT
OF
MIAX PRODUCTS, LLC

The undersigned is executing this Limited Liability Company Agreement (the "Agreement") as of January 25, 2019, for the purpose of forming a limited liability company (the "Company") pursuant to the provisions of the Illinois Limited Liability Company Act, 805 ILCS 180/, as amended from time to time (the "Act"), and does hereby agree as follows:

1. **Formation.** A certificate of formation of the Company (the "Certificate") was executed and filed with the Office of the Secretary of State of the State of Illinois on January 25, 2019.

2. **Name.** The name of the limited liability company shall be **"MIAX Products, LLC"**, or such other name as the Member may from time to time hereafter designate.

3. **Definitions.** Capitalized terms not otherwise defined herein shall have the meanings set forth therefor in Section 1-5 of the Act.

4. **Purpose.** The Company is formed for the purpose of engaging in any lawful business permitted by the Act or the laws of any jurisdiction in which the Company may do business. The Company shall have the power to engage in all activities and transactions which the Member deems necessary or advisable in connection with the foregoing.

5. **Offices.** The principal place of business and office of the Company shall be located at, and the Company's business shall be conducted from, such place or places as the Member may designate from time to time.

The registered office of the Company in the State of Illinois shall be located at c/o CT Corporation System, 208 South LaSalle Street, Suite 814, Chicago, IL 60604. The name and address of the registered agent of the Company for service of process on the Company in the State of Illinois shall be CT Corporation System, 208 South LaSalle Street, Suite 814, Chicago, IL 60604. The Member may from time to time change the registered agent or office by an amendment to the certificate of formation of the Company.

6. **Member.** Miami International Holdings, Inc. is the sole member of the Company (the "Member") holding 100% of the membership interests of the Company. The name and business or residence address of the Member is 7 Roszel Road, Suite 5-A, Princeton, NJ 08504.

7. **Term.** The term of the Company shall commence on the date of filing of the certificate of formation of the Company in accordance with the Act and shall continue until the Company is dissolved and its affairs are wound up in accordance with Section 17 of this Agreement and a certificate of cancellation is filed in accordance with the Act.

8. **Board of Directors; Delegation of Authority and Duties.**

(a) Member and Board of Directors. The Member, acting through the Board (defined below), shall manage and control the business and affairs of the Company, and shall possess all rights and powers as provided in the Act and otherwise by law. Except as otherwise expressly provided for herein, the Member hereby consents to the exercise by the Board of all such powers and rights conferred on them by the Act with respect to the management and control of the Company. Notwithstanding the foregoing and except as explicitly set forth in this Agreement, if a vote, consent or approval of the Member is required by the Act or other applicable law with respect to any act to be taken by the Company or matter considered by the Board, the Member agrees that it shall be deemed to have consented to or approved such act or voted on such matter in accordance with a vote of the Board on such act or matter.

(b) Delegation by Board. The Board shall have the power and authority to delegate to one or more other persons the Board's rights and powers to manage and control the business and affairs of the Company, including to delegate to agents and employees of the Member, a Director (as defined below) or the Company (including Officers), and to delegate by a management agreement or another agreement with, or otherwise to, other persons. The Board may authorize any person (including, without limitation, the Member or any Officer or Director) to enter into and perform under any document on behalf of the Company.

(c) Committees. The Board may, from time to time, designate one or more committees, each of which shall be comprised of at least two Directors. Any such committee, to the extent provided in the enabling resolution and until dissolved by the Board, shall have and may exercise any or all of the authority of the Board. At every meeting of any such committee, the presence of a majority of all the representatives thereof shall constitute a quorum, and the affirmative vote of a majority of the representatives present shall be necessary for the adoption of any resolution. The Board may dissolve any committee at any time, unless otherwise provided in this Agreement.

9. **Establishment of Board of Directors.**

(a) Directors. There shall be established a Board of Directors (the "Board") composed of not less than (1) and no more than twenty-one (21) persons as determined from time to time by the Member ("Directors"), each of whom shall be elected by the Member. Any Director may be removed from the Board at any time by the Member. Each Director shall remain in office until his or her death, resignation or removal. In the event of death, resignation or removal of a Director, the party or parties, as applicable, which appointed such Director shall fill the vacancy created. Notwithstanding anything in this Agreement to the contrary, Directors shall not be deemed to be "members" or "managers" (as such terms are defined in the Act) of the Company.

(b) No Individual Authority. No Director has the authority or power to act for or on behalf of the Company, to do any act that would be binding on the Company or to make any expenditures or incur any obligations on behalf of the Company or authorize any of the foregoing, other than acts that are authorized by the Board.

(c) Chairman. The Board shall designate a Director to serve as chairman. The chairman shall, unless a majority of Directors present determine otherwise, preside at all meetings of the Board. If the chairman is absent at any meeting of the Board, a majority of the Directors present shall designate another Director to serve as interim chairman for that meeting.

10. **Officers.** The Member may, from time to time as it deems advisable, designate natural persons as officers of the Company (the "Officers") or successor Officers of the Company and assign titles to any such person. Unless the Member decides otherwise, if the title is one commonly used for officers of a business corporation formed under the Illinois Business Corporation Act, the assignment of such title shall constitute the delegation to such person of the authorities and duties that are normally associated with that office. Any delegation pursuant to this Section 10 may be revoked at any time by the Member. An Officer may be removed with or without cause at any time by the Member.

11. **Advisory Board.** The Member may appoint any person or persons to act in an advisory capacity to the Company. Such a group shall be known as the Advisory Board.

12. **Capital Contributions**. The Member shall make capital contributions to the Company from time to time, which amounts shall be set forth in the books and records of the Company.

13. **Transfers of Member Interest.** The Member may sell, assign, pledge or otherwise transfer or encumber (collectively, a "Transfer") any of its Limited Liability Company Interest in the Company to any Person so long as such Transfer is in writing.

14. **Resignation**. The Member shall have the right to resign from the Company so long as such resignation is in writing. The provisions hereof with respect to distributions upon resignation are exclusive and no Member shall be entitled to claim any further or different distribution upon resignation under the Act or otherwise.

15. **Allocations and Distributions.** Distributions of cash or other assets of the Company shall be made at such times and in such amounts as the Member may determine. Distributions shall be made to (and profits and losses of the Company shall be allocated among) the Member.

16. **Return of Capital**. The Member has the right to receive any distributions which include a return of all or any part of such Member's capital contribution, provided that upon the dissolution and winding up of the Company, the assets of the Company shall be distributed as provided in the Act.

17. **Dissolution**. The Company shall be dissolved and its affairs wound up upon the occurrence of an event causing a dissolution of the Company under the Act, except the Company shall not be dissolved upon the occurrence of an event that terminates the continued membership of a Member if (i) at the time of the occurrence of such event there are at least two Members of the Company, or (ii) within ninety (90) days after the occurrence of such event, all remaining Members agree in writing to continue the business of the Company and to the appointment,

effective as of the date of such event, of one or more additional Members. In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority set forth in the Act.

18. **Amendments**. This Agreement may be amended only upon the written consent of the Member.

19. **Other Business**. The Member may engage in or possess an interest in other business ventures of every kind and description, independently or with others. The Company shall not have any rights in or to such independent ventures or the income or profits therefrom by virtue of this Agreement.

20. **Limited Liability**. The Member shall not have any liability for the debts, obligations or liabilities of the Company except to the extent provided by the Act.

21. **Exculpation; Indemnification**. Neither the Member, the Officers nor any of their respective affiliates or agents (collectively, "Covered Persons") shall be liable to the Company or any other person or entity who has an interest in the Company for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement. To the fullest extent permitted by applicable law, each Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Member or Officer, as applicable, by this Agreement; provided, however, that any indemnity under this Section 21 shall be provided out of and to the extent of Company assets only, and neither the Member nor the Officer, as applicable, nor any other Covered Person, shall have personal liability on account thereof.

22. **Banking Matters**. The Member and each Officer and any agent or employee of the Company, or other person designated by such Member or Officer is hereby authorized and empowered (A) to (i) establish one or more domestic or international accounts (including but not limited to, depository, checking, disbursement, custodian, or investment accounts, and other accounts as deemed necessary or expeditious for business purposes of the Company) ("Accounts"), in the name of the Company with any bank, trust company, savings and loan institution, brokerage firm or other financial institution which said Member or Officer shall from time to time designate as a depository of funds, securities or other property of the Company, for any purpose and on terms and conditions deemed appropriate by such person on behalf of the Company; and (ii) close Accounts of the Company now or hereafter established; and (B) to assign, limit or revoke any and all authority of any agent or employee of the Company, or other person designated by such Member or Officer to (i) sign checks, drafts and orders for the payment of money drawn on the Company's Accounts, and all notes of the Company and all acceptances and endorsements of the Company; (ii) execute or initiate electronic fund transfers; (iii) execute or initiate foreign currency

exchange transactions; (iv) execute or initiate the investment of monies; and (v) initiate requests for information for any Account of the Company.

23. **Amendment**. This Agreement may only be amended by a writing duly signed by the Member.

24. **Governing Law**. This Agreement shall be governed by, and construed under, the laws of the State of Illinois, without regard to conflict of law rules.

IN WITNESS WHEREOF, the undersigned has duly executed this Agreement as of the date first written above.

MIAMI INTERNATIONAL HOLDINGS, INC.

By: _____

THOMAS P. GALLAGHER
Chairman and Chief Executive Officer
7 Roszel Road, Suite 5-A
Princeton, NJ 08540

EXHIBIT J

Exhibit Request:

A list of the officers, governors, members of all standing committees, or persons performing similar functions, who presently hold or have held their offices or positions during the previous year, indicating the following for each:

1. **Name.**

2. **Title.**

3. **Dates of commencement and termination of term of office or position.**

4. **Type of business in which each is primarily engaged (e.g., floor broker, specialist, odd lot dealer, etc.).**

Response:

1. **Officers of MIAX PEARL, LLC**

The following persons are the officers of the Exchange:

Name	Title
Thomas P. Gallagher	Chairman and Chief Executive Officer
Douglas M. Schafer, Jr.	Chief Information Officer and Executive Vice President
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary
Paul Warner	Executive Vice President and Chief Financial Officer
Edward Deitzel	Executive Vice President, Chief Regulatory Officer and Chief Compliance Officer
Shelly Brown	Executive Vice President – Strategic Planning and Business Development
John Smollen	Executive Vice President – Head of Exchange Traded Products and Strategic Relations
Randy Foster	Senior Vice President – Business Systems Development
Harish Jayabalan	Senior Vice President – Chief Risk Officer and Chief Information Security Officer
Matthew Rotella	Senior Vice President – Chief Technology Officer
Joseph W. Ferraro III	Senior Vice President – Deputy General Counsel
Deborah Carroll	Senior Vice President, Associate General Counsel and Assistant Corporate Secretary
Richard Ross	Senior Vice President of Exchange Traded Products

Name	Title
Joseph S. Bracco	Senior Vice President – Head of Sales
Amy Neiley	Senior Vice President – Trading Operations and Listings
Roli Bhotika	Vice President – Head of Business Development
Lawrence O'Leary	Vice President – Market Surveillance
Laurence Gardner	Vice President – Regulatory Operations
Rodney Hester	Vice President – Systems Infrastructure
Shawn Hughes	Vice President – Project Management
James O'Neil	Vice President and Director of Physical Security and Safety
Vinay Rao	Vice President – Trading Systems Development
Siddharth Sahoo	Vice President – Trading Systems Development
Tia Toms	Vice President – Administration
Kelly Fitzgerald	Assistant Vice President – Controller
Christopher Solgan	Assistant Vice President – Senior Counsel
Gregory Ziegler	Assistant Vice President – Senior Associate Counsel

The officers of the Exchange serve until their successors are appointed in accordance with the By-Laws of the Exchange. Officers of the Exchange serve at the direction of the Board of Directors.

2. Directors of MIAX PEARL, LLC

The following persons are the directors of the Exchange as of March 20, 2019:

Name	Classification	Term of Office	Type of Business
Thomas P. Gallagher	Industry	So long as CEO of the Company	Securities Exchange
Kurt M. Eckert	Industry	Class III – 2020	Partner – Wolverine Trading, LLC
Leslie Florio	Non-Industry/ Independent	Class III – 2020	Board of Trustees – The Hun School of Princeton; President – Maxwell Place Condominium Association
Sebastiaan Koeling	Industry/Member Representative	Class III – 2020	Chief Executive Officer – Optiver US LLC
Cynthia Schwarzkopf	Non-Industry/ Independent	Class III – 2020	Professional and Philanthropic Public Speaker

Name	Classification	Term of Office	Type of Business
Richard Herr	Industry/Member Representative	Class I – 2021	Managing Director – Sandler O'Neill & Partners, L.P.
Lawrence E. Jaffe	Non-Industry/ Independent	Class I – 2021	Attorney
Mark I. Massad	Industry	Class I – 2021	CEO – Dana Holdings BOA, Ltd.
Robert D. Prunetti	Non-Industry/ Independent	Class I – 2021	President – Phoenix Ventures, LLC
William T. Bergman	Non-Industry/ Independent	Class II – 2022	Vice President and Special Assistant to the President – Temple University
Lindsay L. Burbage	Non-Industry/ Independent	Class II – 2022	Attorney
Michael Harrington	Industry	Class II – 2022	Head of Client Relationships – Citadel, LLC
Benjamin Londergan	Industry/Member Representative	Class II – 2022	Managing Director Strategic Relationships and Market Ecosystem, PEAK6 Capital Management LLC
John E. McCormac	Non-Industry/ Independent	Class II – 2022	Township Mayor – Woodbridge, New Jersey; Former New Jersey State Treasurer

3. Committees of MIAX PEARL, LLC

The standing committees of the Board and the persons appointed to sit on the standing committees are as follows:

COMPENSATION COMMITTEE	
Name	**Classification**
Cynthia Schwarzkopf (Chair)	Non-Industry/Independent
William T. Bergman	Non-Industry/Independent
Robert D. Prunetti	Non-Industry/Independent

AUDIT COMMITTEE	
Name	**Classification**
Robert D. Prunetti (Chair)	Non-Industry/Independent
John E. McCormac	Non-Industry/Independent
Cynthia Schwarzkopf	Non-Industry/Independent

REGULATORY OVERSIGHT COMMITTEE	
Name	**Classification**
Lindsay L. Burbage (Chair)	Non-Industry/Independent
Leslie Florio	Non-Industry/Independent
Lawrence E. Jaffe	Non-Industry/Independent

APPEALS COMMITTEE	
Name	**Classification**
Lawrence E. Jaffe (Chair)	Non-Industry/Independent
Kurt M. Eckert	Industry
Richard Herr	Industry/Member Representative

TECHNOLOGY COMMITTEE	
Name	**Classification**
Leslie Florio (Chair)	Non-Industry/Independent
Kurt M. Eckert	Industry
John E. McCormac	Non-Industry/Independent