



Barbara J. Comly  
General Counsel

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June 30, 2020

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

**Re: MIAX Emerald, LLC (“Emerald”)  
Amendment 2020-6 to Form 1 Application**

Dear Ms. Marshall:

Enclosed for official filing is Amendment 2020-6 to the Form 1 Application of Emerald, which includes the following changes:

Exhibit C – Updated committee members and subsidiary information  
Exhibits D, I, K, M & N – Annual filing pursuant to Rule 6a-2(b)

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

Very truly yours,

*Barbara J. Comly*

Barbara J. Comly  
EVP, General Counsel & Corporate Secretary

Enclosures  
cc: Marlene Olsen

Form 1 Page 1 Execution Page	<b>UNITED STATES SECURITIES AND EXCHANGE COMMISSION</b> <b>WASHINGTON, D.C. 20549</b> <b>APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR,</b> <b>REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION</b> <b>FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANGE ACT</b>	Date filed (MM/DD/YY):  06/30/2020	OFFICIAL USE ONLY
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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 Emerald, LLC
2. Provide the applicant's primary street address (Do not use a P.O. Box): 7 Roszel Road, Suite 1A, 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 Emerald, LLC  
7 Roszel Road, Suite 1A  
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):



20012259

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): 01/30/18                      (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.

**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 EMERALD, LLC

Date: June 30, 2020

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

Subscribed and sworn before me this 30<sup>th</sup> day of June, 2020.

\_\_\_\_\_  
Notary Public of the State of New Jersey

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

## EXHIBIT C

### Exhibit Request:

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

1. Name and address of organization.
2. Form of organization (e.g., association, corporation, partnership, etc.).
3. Name of state and statute citation under which organized. Date of incorporation in present form.
4. Brief description of nature and extent of affiliation.
5. Brief description of business or functions. Description should include responsibilities with respect to operation of the System and/or execution, reporting, clearance, or settlement of transactions in connection with operation of the System.
6. A copy of the constitution.
7. A copy of the articles of incorporation or association including all amendments.
8. A copy of existing by-laws or corresponding rules or instruments.
9. The name and title of the present officers, governors, members of all standing committees, or persons performing similar functions.
10. An indication of whether such business or organization ceased to be associated with the applicant during the previous year, and a brief statement of the reasons for termination of the association.

### Response:

#### **A. MIAMI INTERNATIONAL HOLDINGS, INC.**

1. *Name:* Miami International Holdings, Inc.  
*Address:* 7 Roszel Road, Suite 1A, 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 Emerald, LLC is a wholly-owned subsidiary of Miami International Holdings, Inc. (“MIH”).
5. *Brief description of business or functions:* Miami International Holdings, Inc. is a holding company which holds 100% of the equity of Miami International Securities Exchange, LLC, MIAX PEARL, LLC, MIAX Emerald, LLC, Miami International Technologies, LLC, MIAX Global, LLC, Miami International Futures Exchange, LLC, MIAX Products, LLC, and M 44 Holdings, LLC and approximately 65% of the outstanding shares of The Bermuda Stock Exchange. 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
Lance Emmons	Executive Vice President and Chief Financial Officer
Edward Deitzel	Executive Vice President and Chief Regulatory Officer
Mark Wetjen	Executive Vice President, Futures and Innovative Products and Executive Regulatory Liaison Officer
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
Amy Neiley	Senior Vice President – Trading Operations and Listings
Rodney Hester	Vice President – Systems Infrastructure
Roli Bhotika	Vice President – Head of Business Development
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
Christopher Solgan	Vice President – Senior Counsel
Tia Toms	Vice President – Administration
Gregory Ziegler	Vice President – Senior Counsel
Kelly Fitzgerald	Assistant Vice President – Controller
Dimitriy Kotov	Assistant Vice President – 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
J. Gray 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
Paul Kotos
Robert D. Prunetti

**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
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.

**B. MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**

1. *Name:* Miami International Securities Exchange, LLC  
*Address:* 7 Roszel Road, Suite 1A, 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:

<b>Name</b>	<b>Title</b>
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
Lance Emmons	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
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

<b>Name</b>	<b>Title</b>
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
Christopher Solgan	Vice President – Senior Counsel
Tia Toms	Vice President – Administration
Gregory Ziegler	Vice President – Senior Counsel
Kelly Fitzgerald	Assistant Vice President – Controller
Dimitriy Kotov	Assistant Vice President – 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:

<b>Directors</b>
Thomas P. Gallagher
Talal Jassim Al-Bahar
Michael P. Ameen
Lindsay L. Burbage
Robert Castrignano
Marianne Deane
John DiBacco, Jr.
David Dooman
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

<b>Observers</b>
Sanjiv Prasad
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:

<b>Audit Committee</b>
Robert D. Prunetti (Chair)
Michael P. Ameen
John E. McCormac

<b>Compensation Committee</b>
J. Gray Teekell (Chair)
Robert D. Prunetti
Cynthia Schwarzkopf

<b>Regulatory Oversight Committee</b>
Lindsay L. Burbage (Chair)
Leslie Florio
Lawrence E. Jaffe

<b>Appeals Committee</b>
Lawrence Jaffe (Chair)
Robert Castrignano
Kurt M. Eckert

<b>Technology Committee</b>
Leslie Florio (Chair)
Robert Castrignano
Marianne Deane
David Dooman
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. MIAX PEARL, LLC**

1. *Name:* MIAX PEARL, LLC  
*Address:* 7 Roszel Road, Suite 1A, 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 February 11, 2016.
4. *Brief description of nature and extent of affiliation:* MIAX PEARL, LLC ("MIAX PEARL") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.
5. *Brief description of business or functions:* MIAX PEARL is registered as a National Securities Exchange under Section 6 of the Securities Exchange Act of 1934, as amended. MIAX PEARL 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 February 11, 2016 is attached.**
8. *A copy of existing by-laws or corresponding rules or instruments:* **The Amended and Restated Limited Liability Company Agreement dated December 5, 2016 and By-Laws dated December 5, 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 MIAX PEARL, LLC**

The following persons are the officers of MIAX PEARL, LLC:

<b>Name</b>	<b>Title</b>
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
Lance Emmons	Executive Vice President and Chief Financial Officer
Edward Deitzel	Executive Vice President, Chief Regulatory Officer and Chief Compliance Officer

<b>Name</b>	<b>Title</b>
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
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
Vinay Rao	Vice President – Trading Systems Development
Siddharth Sahoo	Vice President – Trading Systems Development
Christopher Solgan	Vice President – Senior Counsel
Tia Toms	Vice President – Administration
Gregory Ziegler	Vice President – Senior Counsel
Kelly Fitzgerald	Assistant Vice President – Controller
Dimitriy Kotov	Assistant Vice President – Associate Counsel

**Directors of MIAX PEARL, LLC**

The following persons are the directors of MIAX PEARL, LLC:

<b>Name</b>
Thomas P. Gallagher
William T. Bergman
Lindsay L. Burbage
Kurt M. Eckert
Leslie Florio
Michael Harrington
Richard Herr

Lawrence E. Jaffe
Benjamin Londergan
Mark I. Massad
John E. McCormac
Robert D. Prunetti
John Rothstein
Cynthia Schwarzkopf

**Committees of MIAX PEARL, LLC**

The standing committees of the Board and the persons appointed to sit on the standing committees are as follows:

<b>Compensation Committee</b>
Cynthia Schwarzkopf (Chair)
William T. Bergman
Robert D. Prunetti

<b>Audit Committee</b>
Robert D. Prunetti (Chair)
John E. McCormac
Cynthia Schwarzkopf

<b>Regulatory Oversight Committee</b>
Lindsay L. Burbage (Chair)
Leslie Florio
Lawrence E. Jaffe

<b>Appeals Committee</b>
Lawrence E. Jaffe (Chair)
Kurt M. Eckert
Richard Herr

<b>Technology Committee</b>
Leslie Florio (Chair)
John E. McCormac
Kurt Eckert

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. MIAMI INTERNATIONAL TECHNOLOGIES, LLC**

1. *Name:* Miami International Technologies, LLC  
*Address:* 7 Roszel Road, Suite 1A, 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:

<b>Name</b>	<b>Title</b>
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
Lance Emmons	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
Rodney Hester	Vice President – Systems Infrastructure

Name	Title
Harish Jayabalan	Vice President – Technical Support and Product Specialist
Tia Toms	Vice President – Administration
James O’Neil	Vice President and Director of Physical Security and Safety
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.

**E. MIAX GLOBAL, LLC**

1. *Name:* MIAX Global, LLC  
*Address:* 7 Roszel Road, Suite 1A, 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
Lance Emmons	Executive Vice President and Chief Financial Officer
Gregory A. Wojciechowski	President

**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.

**F. MIAMI INTERNATIONAL FUTURES EXCHANGE, LLC**

- Name:* Miami International Futures Exchange, LLC  
*Address:* 7 Roszel Road, Suite 1A, Princeton, New Jersey 08540
- Form of organization:* Limited Liability Company.
- 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.
- 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.
- 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.
- 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
Mark Wetjen	Chief Executive Officer
Douglas M. Schafer, Jr.	Chief Information Officer and Executive Vice President
Barbara Comly	Executive Vice President, General Counsel and Corporate Secretary
Lance Emmons	Executive Vice President and Chief Financial Officer

**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.*

**G. MIAX PRODUCTS, LLC**

1. *Name: MIAX Products, LLC  
Address: 7 Roszel Road, Suite 1A, 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

**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.

**H. M 44 HOLDINGS, LLC**

1. *Name:* M 44 Holdings, LLC  
*Address:* 7 Roszel Road, Suite 1A, 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 21, 2019.
4. *Brief description of nature and extent of affiliation:* M 44 Holdings, LLC ("M 44") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions:* M 44 is a holding company for certain investments.
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 21, 2019 is attached.**
8. *A copy of existing by-laws or corresponding rules or instruments:* **The Limited Liability Company Agreement dated June 26, 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 M 44 Holdings, LLC**

The following persons are the officers of M 44 Holdings, LLC:

Name	Title
Thomas P. Gallagher	Chairman & Chief Executive Officer
Barbara Comly	Executive Vice President, General Counsel & Corporate Secretary
Douglas M. Shafer, Jr.	Executive Vice President & Chief Information Officer

**Directors of M 44 Holdings, LLC**

The following persons are the directors of M 44 Holdings, 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.

**I. THE BERMUDA STOCK EXCHANGE**

1. *Name:* The Bermuda Stock Exchange  
*Address:* 30 Victoria Street, 3F, Hamilton, Bermuda
2. *Form of organization:* A body corporate incorporated pursuant to The Bermuda Stock Exchange Act 1992.
3. *Name of state, statute under which organized and date of incorporation:* Bermuda, The Bermuda Stock Exchange Company Act 1992, on March 10, 1993.

4. *Brief description of nature and extent of affiliation:* Miami International Holdings, Inc., which is the applicant's 100% owner, is the owner of 64.455% of the outstanding shares of The Bermuda Stock Exchange ("BSX").
5. *Brief description of business or functions:* Stock Exchange located in Hamilton, Bermuda.
6. *A copy of the constitution:* Not applicable.
7. *A copy of the articles of incorporation or association including all amendments:* **The Memorandum of Association dated March 10, 1993, is attached.**
8. *A copy of existing by-laws or corresponding rules or instruments:* **The Bye-Laws dated August 24, 2001, are attached.**
9. *The name and title of the present officers, governors, members of all standing committees, or persons performing similar functions:*

**Officers of The Bermuda Stock Exchange**

The following persons are the officers of The Bermuda Stock Exchange:

<b>Name</b>	<b>Title</b>
Gregory A. Wojciechowski	President & Chief Executive Officer
Gregory A. Wojciechowski	Secretary
James McKirdy	Chief Compliance Officer

**Council (Directors) of The Bermuda Stock Exchange**

<b>Council</b>
Thomas P. Gallagher (Chairman)
David Brown (Deputy Chairman)
Jeff Conyers
Caroline Kennedy
Scott Lines
Alan Marshall
Mark Massad
Michael Neff
Eric Sites
Murray Stahl
Keith Stock
John Wight
Gregory A. Wojciechowski

<b>Alternate Council</b>
Alan Marshall (for Keith Stock and FFI International)
Malcolm Moseley (for Scott Lines)

**Committees of The Bermuda Stock Exchange**

<b>Business Development Committee</b>
Eric Sites
Jeff Conyers
Michael Neff
Keith Stock
Gregory A. Wojciechowski

<b>Compensation Committee</b>
Thomas P. Gallagher
David Brown
Jeff Conyers
Michael Neff

<b>Executive Management Committee</b>
Thomas P. Gallagher
David Brown
Jeff Conyers
Scott Lines
Michael Neff

<b>Listing Committee</b>
Dudley Cottingham
Susan Monkman
Sharon Beesley
Miguel DaPonte
Gregory A. Wojciechowski

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.*

## J. BSD NOMINEE LIMITED

1. *Name:* BSD Nominee Limited  
*Address:* 30 Victoria Street, 3F, Hamilton, Bermuda
2. *Form of organization:* A body corporate incorporated pursuant to Bermuda, The Companies Act 1981.
3. *Name of state, statute under which organized and date of incorporation:* Organized in Bermuda under The Companies Act 1981 on October 24, 2001. Registered in Bermuda under Section 14 of The Companies Act 1981 on November 1, 2001.
4. *Brief description of nature and extent of affiliation:* Miami International Holdings, Inc., which is the applicant's 100% owner, is the owner of 64.455% of the outstanding shares of The Bermuda Stock Exchange ("BSX"). BSX is the owner of 100% of the outstanding shares of BSD Nominee Limited.
5. *Brief description of business or functions:* To be the legal owner of shares held for the benefit of account holders of the Bermuda Securities Depository of BSX and to provide nominee services in relation to such shares.
6. *A copy of the constitution:* Not applicable.
7. *A copy of the articles of incorporation or association including all amendments:* **The Memorandum of Association dated October 24, 2001, and related documents is attached.**
8. *A copy of existing by-laws or corresponding rules or instruments:* Not applicable.
9. *The name and title of the present officers, governors, members of all standing committees, or persons performing similar functions:*

### **Council (Directors) of BSD Nominee Limited**

The following persons are the council of BSD Nominee Limited:

<b>Council</b>
Gregory A. Wojciechowski
James McKirdy

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.



BERMUDA  
THE COMPANIES ACT 1981  
MEMORANDUM OF ASSOCIATION OF  
COMPANY LIMITED BY SHARES  
(Section 7(1) and (2))

MEMORANDUM OF ASSOCIATION  
OF

**BSD Nominee Limited**  
(hereinafter referred to as "the Company")

1. The liability of the members of the Company is limited to the amount (if any) for the time being unpaid on the shares respectively held by them.
2. We, the undersigned, namely,

NAME	ADDRESS	BERMUDIAN STATUS (Yes/No)	NATIONALITY	NUMBER OF SHARES SUBSCRIBED
Graham B. R. Collis	Clarendon House 2 Church Street Hamilton HM 11 Bermuda	Yes	British	1
Alison R. Guilfoyle	"	No	British	1
John C. R. Collis	"	Yes	British	1

do hereby respectively agree to take such number of shares of the Company as may be allotted to us respectively by the provisional directors of the Company, not exceeding the number of shares for which we have respectively subscribed, and to satisfy such calls as may be made by the directors, provisional directors or promoters of the Company in respect of the shares allotted to us respectively.

3. The Company is to be a **local** Company as defined by the Companies Act 1981.
4. The Company, with the consent of the Minister of Finance, has power to hold land situate in Bermuda not exceeding \_\_\_ in all, including the following parcels:-

**N/A**

5. The authorised share capital of the Company is **BDS12,000.00** divided into shares of **BDS1.00** each. The minimum subscribed share capital of the Company is **BDS12,000.00**.
6. The objects for which the Company is formed and incorporated are -

To be the legal owner of shares held for the benefit of account holders of the Bermuda Securities Depository of The Bermuda Stock Exchange and to provide nominee services in relation to such shares.

Signed by each subscriber in the presence of at least one witness attesting the signature thereof

*[Handwritten signature]*

*[Handwritten signature]*

*[Handwritten signature]*

(Subscribers)

*[Handwritten signature]*

*[Handwritten signature]*

*[Handwritten signature]*

(Witnesses)

SUBSCRIBED this 24<sup>th</sup> day of October, 2001.





BERMUDA

## CERTIFICATE OF INCORPORATION

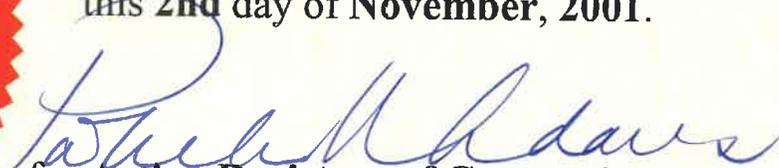
I hereby in accordance with the provisions of section 14 of *the Companies Act 1981* issue this Certificate of Incorporation and do certify that on the 1st day of **November, 2001**

### **BSD Nominee Limited**

was registered by me in the Register maintained by me under the provisions of the said section and that the status of the said company is that of a **local** company.



Given under my hand and the Seal of  
the REGISTRAR OF COMPANIES  
this **2nd** day of **November, 2001**.

  
for **Acting Registrar of Companies**

# THE COMPANIES ACT 1981

## FIRST SCHEDULE

A company limited by shares may exercise all or any of the following powers subject to any provision of the law or its memorandum:

1. [Deleted]
2. to acquire or undertake the whole or any part of the business, property and liabilities of any person carrying on any business that the company is authorised to carry on;
3. to apply for register, purchase, lease, acquire, hold, use, control, licence, sell, assign or dispose of patents, patent rights, copyrights, trade makers, formulae, licences, inventions, processes, distinctive makers and similar rights;
4. to enter into partnership or into any arrangement for sharing of profits, union of interests, co-operation, joint venture, reciprocal concession or otherwise with any person carrying on or engaged in or about to carry on or engage in any business or transaction that the company is authorised to carry on or engage in or any business or transaction capable of being conducted so as to benefit the company;
5. to take or otherwise acquire and hold securities in any other body corporate having objects altogether or in part similar to those of the company or carrying on any business capable of being conducted so as to benefit the company;
6. subject to section 96 to lend money to any employee or to any person having dealings with the company or with whom the company proposes to have dealings or to any other body corporate any of those shares are held by the company;
7. to apply for, secure or acquire by grant, legislative enactment, assignment, transfer, purchase or otherwise and to exercise, carry out and enjoy any charter, licence, power, authority, franchise, concession, right or privilege, that any government or authority or any body corporation or other public body may be empowered to grant, and to pay for, aid in and contribute toward carrying it into effect and to assume any liabilities or obligations incidental thereto;
8. to establish and support or aid in the establishment and support of associations, institutions, funds or trusts for the benefit of employees or former employees of the company or its predecessors, or the dependants or connections of such employees or former employees, and grant pensions and allowances, and make payments towards insurance or for any object similar to those set forth in this paragraph, and to subscribe or guarantee money for charitable, benevolent, educational and religious objects or for any exhibition or for any public, general or useful objects;
9. to promote any company for the purpose of acquiring or taking over any of the property and liabilities of the company or for any other purpose that may benefit the company;

10. to purchase, lease, take in exchange, hire or otherwise acquire any personal property and any rights or privileges that the company considers necessary or convenient for the purposes of its business;
11. to construct, maintain, alter, renovate and demolish any buildings or works necessary or convenient for its objects;
12. to take land in Bermuda by way of lease or letting agreement for a term not exceeding twenty-one years, being land "*bona fide*" required for the purposes of the business of the company and with the consent of the Minister granted in his discretion to take land in Bermuda by way of lease or letting agreement for a similar period in order to provide accommodation or recreational facilities for its officers and employees and when no longer necessary for any of the above purposes to terminate or transfer the lease or letting agreement;
13. except to the extent, if any, as may be otherwise expressly provided in its incorporating Act or memorandum and subject to the provisions of this Act every company shall have power to invest the moneys of the Company by way of mortgage of real or personal property of every description in Bermuda or elsewhere and to sell, exchange, vary, or dispose of such mortgage as the company shall from time to time determine;
14. to construct, improve, maintain, work, manage, carry out or control any roads, ways, tramways, branches or sidings, bridges, reservoirs, watercourses, wharves, factories, warehouses, electric works, shops, stores and other works and conveniences that may advance the interests of the company and contribute to, subsidise or otherwise assist or take part in the construction, improvement, maintenance, working, management, carrying out or control thereof;
15. to raise and assist in raising money for, and aid by way of bonus, loan, promise, endorsement, guarantee or otherwise, any person and guarantee the performance or fulfilment of any contracts or obligations of any person, and in particular guarantee the payment of the principal of and interest on the debt obligations of any such person;
16. to borrow or raise or secure the payment of money in such manner as the company may think fit;
17. to draw, make, accept, endorse, discount, execute and issue bills of exchange, promissory notes, bills of lading, warrants and other negotiable or transferable instruments;
18. when properly authorised to do so, to sell, lease, exchange or otherwise dispose of the undertaking of the company or any part thereof as an entirety or substantially as an entirety for such consideration as the company thinks fit;
19. to sell, improve, manage, develop, exchange, lease, dispose of, turn to account or otherwise deal with the property of the company in the ordinary course of its business;

20. to adopt such means of making known the products of the company as may seem expedient, and in particular by advertising, by purchase and exhibition of works of art or interest, by publication of books and periodicals and by granting prizes and rewards and making donations;
21. to cause the company to be registered and recognised in any foreign jurisdiction, and designate persons therein according to the laws of that foreign jurisdiction or to represent the company and to accept service for and on behalf of the company of any process or suit;
22. to allot and issue fully-paid shares of the company in payment or part payment of any property purchase or otherwise acquired by the company or for any past services performed for the company;
23. to distribute among the members of the company in cash, kind, specie or otherwise as may be resolved, by way of dividend, bonus or in any other manner considered advisable, any property of the company, but not so as to decrease the capital of the company unless the distribution is made for the purpose of enabling the company to be dissolved or the distribution, apart from this paragraph, would be otherwise lawful;
24. to establish agencies and branches;
25. to take or hold mortgages, hypothecs, liens and charges to secure payment of the purchase price, or of any unpaid balance of the purchase price, of any part of the property of the company of whatsoever kind sold by the company, or for any money due to the company from purchasers and others and to sell or otherwise dispose of any such mortgage, hypothec, lien or charge;
26. to pay all costs and expenses of or incidental to the incorporation and organisation of the company;
27. to invest and deal with the moneys of the company not immediately required for the objects of the company in such manner as may be determined;
28. to do any of the things authorised by this subsection and all things authorised by its memorandum as principals, agents, contractors, trustees or otherwise, and either alone or in conjunction with others;
29. to do all such other things as are incidental or conducive to the attainment of the objects and the exercise of the powers of the company.

Every company may exercise its powers beyond the boundaries of Bermuda to the extent to which the laws in force where the powers are sought to be exercised permit.

FORM NO. 1a



**BERMUDA**  
**THE COMPANIES ACT 1981**  
**CONSENT**

**Pursuant to Section 4A**

In exercise of the powers conferred upon him by section 4A of the Companies Act 1981, the Minister of Finance hereby gives his consent to:-

**BSD Nominee Limited**

to carry on restricted business activities in accordance with the Companies Act 1981.

Dated this

*1<sup>st</sup>*

day of

*November*

2001

Minister of Finance

## EXHIBIT D

### **Exhibit Request:**

**For each subsidiary or affiliate of the exchange, provide unconsolidated financial statements for the latest fiscal year. Such financial statements shall consist, at a minimum, of a balance sheet and an income statement with such footnotes and other disclosures as are necessary to avoid rendering the financial statements misleading. If any affiliate or subsidiary is required by another Commission rule to submit annual financial statements, a statement to that effect, with a citation to the other Commission rule, may be provided in lieu of the financial statements required here.**

### **Response:**

1. Unaudited unconsolidated financial statements of Miami International Holdings, Inc. as of December 31, 2019 are attached.
2. Audited unconsolidated financial statements of Miami International Securities Exchange, LLC as of December 31, 2019 are attached.
3. Audited unconsolidated financial statements of MIAX PEARL, LLC as of December 31, 2019 are attached.
4. Unaudited unconsolidated financial statements of Miami International Technologies, LLC as of December 31, 2019 are attached.
5. Unaudited unconsolidated financial statements of M 44 Holdings, LLC as of December 31, 2019 are attached.
6. Unaudited unconsolidated financial statements of The Bermuda Stock Exchange as of December 31, 2019 are attached.
7. Miami International Futures Exchange, LLC, MIAX Global, LLC, MIAX Products, LLC, and BSD Nominee Limited are not active and financial statements are not available for these companies.

**MIAMI INTERNATIONAL HOLDINGS, INC.**

**Financial Statements**  
**December 31, 2019 and 2018**  
**(Unaudited)**

**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**UNCONSOLIDATED BALANCE SHEETS**  
**(UNAUDITED)**

	<b>2019</b>	<b>2018</b>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 5,109,941	\$ 5,705,721
Restricted cash	1,060,016	400,017
Prepaid and other current assets	5,492,900	1,785,864
Total current assets	11,662,858	7,891,602
Fixed assets, net of depreciation and amortization	4,118,853	4,292,457
Other assets	9,319,965	907,663
Due from subsidiaries (to Miami International Holdings, Inc.)	365,387,580	333,988,311
Total assets	\$ 390,489,256	\$ 347,080,033
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 2,233,120	\$ 3,110,352
Accrued compensation payable	2,258,160	2,480,462
Current debt	67,829	11,678,761
Total current liabilities	4,559,109	17,269,575
Long term debt	84,476,660	29,714,139
Warrants with puttable shares (Cash obligation December 31, 2019 and 2018, \$0)	153,505,667	134,751,201
Total liabilities	242,541,436	181,734,915
<b>SHAREHOLDERS' EQUITY</b>		
Preferred stock - par value \$0.001 (25,000,000 authorized; 437,000 Series B issued and outstanding at December 31, 2019 and 436,000 Series B issued and outstanding at December 31, 2018)	437	436
Common stock - voting and nonvoting, par value \$0.001 (600,000,000 authorized (voting 400,000,000, nonvoting 200,000,000); 67,989,828 issued and outstanding at December 31, 2019 (voting 63,030,707, nonvoting 4,959,121) and 66,749,702 issued and outstanding at December 31, 2018 (voting 61,990,581, nonvoting 4,759,121)	67,990	66,750
Additional paid in capital in excess of par	374,773,348	362,145,185
Accumulated deficit	(226,893,954)	(196,867,253)
Total shareholders' equity	147,947,820	165,345,118
Total liabilities and shareholders' equity	\$ 390,489,256	\$ 347,080,033

**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**UNCONSOLIDATED STATEMENTS OF OPERATIONS**  
**(UNAUDITED)**

	<u>Years Ended December 31,</u>	
	<u>2019</u>	<u>2018</u>
REVENUES		
Other revenue	\$ 208,171	\$ 3,139
Total revenues	<u>208,171</u>	<u>3,139</u>
OPERATING EXPENSES		
Employee compensation and benefits	6,873,856	9,275,266
Information technology and communication costs	45,268	26,263
Depreciation and amortization	1,312,264	1,327,689
Occupancy costs	185,797	536,709
Professional services	2,370,141	4,337,906
Financial and banking consulting services	1,239,804	1,621,392
Trading operations costs	1,032,500	10,055
Share based compensation to third parties	718,218	809,287
Directors' fees	464,059	515,837
Other	<u>1,425,449</u>	<u>1,118,647</u>
Total operating expenses	<u>15,667,356</u>	<u>19,579,051</u>
OPERATING LOSS	<u>(15,459,185)</u>	<u>(19,575,912)</u>
Interest expense	(9,872,435)	(6,050,696)
Amortization of debt discount and beneficial conversion feature	(1,266,953)	(661,504)
Financing related costs	(5,435,017)	(4,058,088)
Gain on sale of State NOL	<u>2,006,887</u>	<u>-</u>
NET LOSS	<u>\$ (30,026,703)</u>	<u>\$ (30,346,200)</u>

**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**UNCONSOLIDATED STATEMENTS OF CASH FLOWS**  
**(UNAUDITED)**

	<b>Years Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (30,026,703)	\$ (30,346,200)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities		
Amortization of debt discount	1,117,629	437,007
Amortization of beneficial conversion	149,325	224,497
Debt conversion expense	8,396	155,994
Deferred interest	5,513,424	141,961
Restricted cash	(659,999)	-
Depreciation expense	1,312,263	1,327,689
Share based compensation expense	2,922,450	3,933,068
Changes in operating assets and liabilities		
Share based compensation expense allocated to subsidiaries	21,827,225	16,937,319
Prepaid and other current assets	(3,707,038)	(39,909)
Other assets	(3,983,336)	(138,214)
Accounts payable and other liabilities	(877,231)	761,542
Accrued compensation payable	(222,302)	435,075
Net cash provided by (used in) operating activities	(6,625,897)	(6,170,171)
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	(492,262)	(670,421)
Net cash provided by (used in) investing activities	(492,262)	(670,421)
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Proceeds from debt	79,065,576	12,558,578
Repayments of term debt	(41,437,020)	(64,702)
Proceeds from purchase of warrants and warrant extension	1,013,676	-
Repurchase of warrants	(1,899,084)	-
Proceeds from issuance of Series B Preferred stock	6,000	530,000
Proceeds from issuance of common stock	1,172,500	6,357,500
Due from subsidiaries (to Miami International Holdings, Inc.)	(31,399,269)	(11,946,532)
Net cash provided by (used in) financing activities	6,522,379	7,434,844
Increase (decrease) in cash and cash equivalents	(595,780)	594,252
Cash and cash equivalents at beginning of year	5,705,721	5,111,469
Cash and cash equivalents at end of year	\$ 5,109,941	\$ 5,705,721
Cash paid during the year for interest	\$ 4,537,240	\$ 5,521,114
<b>Non-cash investing activities</b>		
Assets acquired under capital leases	\$ 9,360	\$ -
Non-cash amount related to capitalized internally developed software	-	23,828
Total non-cash investing activities	\$ 9,360	\$ 23,828
Conversion of short term loan to common stock	\$ 250,000	\$ 10,001,520
Common stock issued in exchange for BSX stock	\$ 4,428,968	\$ -

Financial Statements and Report of  
Independent Certified Public Accountants

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**

December 31, 2019 and 2018

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

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**GRANT THORNTON LLP**

757 Third Avenue, 9<sup>th</sup> Floor  
New York, NY 10017

D +1 212 599 0100

**REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS**

Board of Directors  
Miami International Securities Exchange, LLC

We have audited the accompanying financial statements of Miami International Securities Exchange, LLC, which comprise the balance sheets as of December 31, 2019 and 2018, and the related statements of operations and member's deficit, and cash flows for the years then ended, and the related notes to the financial statements.

**Management's responsibility for the financial statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

**Auditor's responsibility**

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Miami International Securities Exchange, LLC as of December 31, 2019 and 2018, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

*Grant Thornton LLP*

New York, New York  
June 29, 2020

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Balance Sheets

December 31, 2019 and 2018

	<u>2019</u>	<u>2018</u>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 6,971,697	\$ 965,861
Accounts receivable	5,268,399	6,324,492
Marketing fees receivable	1,912,568	2,236,699
Prepaid and other current assets	<u>1,220,716</u>	<u>1,172,191</u>
Total current assets	15,373,380	10,699,243
Fixed assets, net of depreciation and amortization	3,843,489	3,895,829
Internally developed software, net of amortization	7,641,115	8,673,639
Other assets	<u>1,074,371</u>	<u>1,118,936</u>
Total assets	<u>\$ 27,932,355</u>	<u>\$ 24,387,647</u>
<b>LIABILITIES AND MEMBER'S EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 1,797,057	\$ 2,392,806
Marketing fees payable	1,938,014	2,271,143
Accrued compensation payable	1,734,191	1,939,211
Current debt	<u>1,091,599</u>	<u>722,542</u>
Total current liabilities	6,560,861	7,325,702
Due to Miami International Holdings, Inc.	227,945,358	243,559,226
Long term debt	<u>703,550</u>	<u>531,030</u>
Total liabilities	235,209,769	251,415,958
Commitments and Contingencies (Note 5)		
<b>DEFICIT IN MEMBER'S EQUITY</b>		
Accumulated losses	<u>(207,277,414)</u>	<u>(227,028,311)</u>
Total member's deficit	<u>(207,277,414)</u>	<u>(227,028,311)</u>
Total liabilities and deficit in member's equity	<u>\$ 27,932,355</u>	<u>\$ 24,387,647</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statements of Operations and Member's Deficit**  
**December 31, 2019 and 2018**

	<b>Years Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
<b>REVENUES</b>		
Transaction fees	\$ 41,729,545	\$ 46,984,677
Access fees	15,379,897	17,609,914
Regulatory fees	15,245,849	22,395,308
Market data fees	4,146,721	3,795,925
Other revenue	893,640	1,085,706
Total revenues	77,395,652	91,871,530
<b>COST OF REVENUES</b>		
Transaction rebates	(22,665,989)	(28,170,516)
<b>NET REVENUES</b>	<u>54,729,663</u>	<u>63,701,014</u>
<b>OPERATING EXPENSES INCURRED DIRECTLY OR ALLOCATED FROM PARENT</b>		
Employee compensation and benefits	9,811,685	11,997,098
Information technology and communication costs	3,114,452	3,977,116
Depreciation and amortization	5,272,469	6,179,506
Occupancy costs	686,437	945,431
Professional services	1,366,670	197,417
Regulatory services fees	1,144,044	1,025,051
Financial and banking consulting services	284,175	353,837
Trading operations costs	5,885,145	7,712,404
Share based compensation to third parties	336,281	21,405
Directors' fees	1,273,331	1,317,798
Other	1,411,016	1,145,259
Total operating expenses	30,585,705	34,872,322
<b>OPERATING PROFIT</b>	<u>24,143,958</u>	<u>28,828,692</u>
Interest expense	(167,894)	(138,587)
Financing related costs	(4,225,167)	(4,428,017)
<b>NET PROFIT (LOSS)</b>	<u>19,750,897</u>	<u>24,262,088</u>
Member's deficit at beginning of year	(227,028,311)	(251,290,399)
Member's deficit at end of year	<u>\$ (207,277,414)</u>	<u>\$ (227,028,311)</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statements of Cash Flows**  
**December 31, 2019 and 2018**

---

	<u>Years Ended December 31,</u>	
	<u>2019</u>	<u>2018</u>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net profit (loss)	\$ 19,750,897	\$ 24,262,088
Adjustments to reconcile net profit (loss) to net cash provided by operating activities		
Depreciation and amortization	5,272,469	6,179,506
Changes in operating assets and liabilities		
Accounts receivable	1,056,093	(1,397,330)
Marketing fees receivable	324,131	(296,532)
Prepaid and other current assets	(48,525)	362,438
Other assets	44,565	1,306,441
Accounts payable and other liabilities	(595,749)	(265,044)
Marketing fees payable	(333,128)	304,969
Accrued compensation payable	(205,019)	(681,828)
Deferred transaction revenue	-	(1,072,938)
Net cash provided by (used in) operating activities	<u>25,265,734</u>	<u>28,701,770</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	<u>(2,821,441)</u>	<u>(3,252,351)</u>
Net cash used in investing activities	<u>(2,821,441)</u>	<u>(3,252,351)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Proceeds from debt	140,645	130,134
Repayments of term debt	(965,234)	(861,693)
Due to Miami International Holdings, Inc.	<u>(15,613,868)</u>	<u>(24,833,119)</u>
Net cash provided by (used in) financing activities	<u>(16,438,457)</u>	<u>(25,564,678)</u>
Increase (decrease) in cash and cash equivalents	6,005,836	(115,259)
Cash and cash equivalents at beginning of year	<u>965,861</u>	<u>1,081,120</u>
Cash and cash equivalents at end of year	<u>\$ 6,971,697</u>	<u>\$ 965,861</u>
Cash paid during the year for interest	<u>\$ 167,894</u>	<u>\$ 138,587</u>
Non-cash investing activities		
Assets acquired under capital leases	\$ 1,366,165	\$ 76,878
Non-cash amount related to capitalized internally developed software	<u>108,270</u>	<u>304,491</u>
Total non-cash investing activities	<u>\$ 1,474,435</u>	<u>\$ 381,369</u>

*The accompanying notes are an integral part of these financial statements.*

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

December 31, 2019 and 2018

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### 1. ORGANIZATION AND OPERATIONS

Miami International Securities Exchange, LLC (“MIAX” or the “Company”) was formed in the State of Delaware on September 10, 2007 and is a wholly-owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), and an affiliate of MIA X PEARL, LLC (“PEARL”), MIA X Emerald, LLC (“Emerald”), Miami International Technologies, LLC (“MIA X Technologies”), Miami International Futures Exchange, LLC (“MIA X Futures”) and MIA X Global, LLC. MIA X provides a marketplace and facilities for the trading of options products for its members and employs a pro-rata market model. PEARL, a second equity options exchange which launched on February 6, 2017 was formed to provide a marketplace for a different market model, the price-time priority model. Emerald, a third equity options exchange which launched on March 1, 2019 is a hybrid of the Company and PEARL exchanges, with a pro-rata market model similar to that of the Company, combined with maker-taker pricing which is offered by PEARL. MIA X Futures intends to provide a marketplace and facilities for the trading of futures products for its members, but is currently inactive. MIA X Technologies will sell or license trading technology. MIA X Global focuses on merger, acquisition and joint venture activities of MIH.

In November 2012, the Company completed the development of its trading systems in anticipation of an early December launch. On December 3, 2012, MIA X received an Approval Order from The United States Securities and Exchange Commission (“SEC”) of its application for registration as a National Securities Exchange and began trading equity options on December 7, 2012.

In December 2011, the Board of Directors approved the amendment by the Parent of its Restated Certificate of Incorporation to place certain ownership and voting limitations on the holders of capital stock of the Parent as required by the SEC in connection with the approval of MIA X as a registered national securities exchange pursuant to Section 6(a) of the Securities and Exchange Act of 1934 (the “Exchange Act”) (the limitations collectively referred to herein as the “Share Restrictions”), which Share Restrictions apply commencing on December 3, 2012 (the “Registration Date”) that MIA X is registered as a national securities exchange pursuant to Section 6(a) of the Exchange Act (the “Amendment”). The Amendment became effective upon approval of the same by the shareholders of the Parent on August 31, 2012.

In December 2011, the Parent’s Board of Directors also approved the Amended and Restated Bylaws of the Parent containing provisions required in connection with the registration of MIA X as a national securities exchange, which Amended and Restated Bylaws became effective on the August 31, 2012.

Due to the fact that the Company has incurred a cumulative loss of approximately \$207 million from February 27, 2008 (date of inception) to December 31, 2019, substantial doubt was raised in the past about the Company’s ability to continue as a going concern. These periodic shortfalls were covered through capital raises and short-term borrowing but the Company’s continuation as a going concern was dependent on its ability to obtain these forms of additional financing.

In an effort to address the conditions and events that gave rise to this situation, the Parent implemented a plan that included a refinancing with its current lender which has provided a substantial cash surplus for the next 12-24 month period. This new loan agreement for \$77 million (of which approximately \$43 million was utilized to repay the outstanding debt with the same lender), is described in more detail in Note 6. To further ensure that the three exchange subsidiaries adequately fund their operations and fulfill their obligations, the parent company, MIH has executed separate funding agreements with MIA X, PEARL and Emerald which provide for seed capital and guarantee ongoing financial support.

Based on the developments outlined above which have substantially enhanced the Company’s cash position as well as the projected results for the next twelve months, management has concluded that there is suffi-

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

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cient liquidity to mitigate the risk that the Company can continue as a going concern. This is based on the following:

- Strong cash position which will provide a cushion in the event that actual results fall short of projections.
- Continued revenue and market share growth.
- Expansion to a business model that includes diversified revenue streams.
- Availability of additional funding from the current lender as well as an equipment financing option to build the equities exchange.

In the event that these steps are not effective and there is a liquidity shortfall, management has other contingency plans and options that are available that would include reducing costs, raising additional capital or expanding current refinancing. There can be no assurance as to the availability or terms upon which such financing and capital might be available.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### **Basis of Presentation**

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“US GAAP”).

### **Use of Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

### **Cash and Cash Equivalents**

All highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents.

The Company periodically maintains cash balances at financial institutions in excess of the \$250,000 Federal Deposit Insurance Corporation insurance limit. As of December 31, 2019 and 2018, cash and cash equivalents were held at major financial institutions. Cash and cash equivalents approximate fair value. It is the Company’s policy to monitor the credit standing of the financial institutions with which it conducts business.

### **Prepaid Expenses**

Prepaid expenses primarily consist of prepaid software maintenance fees and insurance which are amortized over the respective periods.

### **Accounts Receivable**

Accounts receivable consists primarily of transaction, access and regulatory fees and the Company’s share of distributable revenue receivable from the Options Price Reporting Authority (“OPRA”). Accounts receivable are primarily collected through the Options Clearing Corporation (“OCC”) and are with large,

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

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highly-rated clearing firms; therefore concentrations of credit risk are limited. The Company has no financing related receivables.

### **Fixed Assets**

Fixed assets are recorded at cost. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets ranging from three to five years. Fixed assets acquired under capital leases are depreciated over the life of the lease. Leasehold improvements are amortized over the estimated useful lives of the improvements or the remaining terms of the leases, whichever is less. Any gain or loss on the retirement of assets is recognized currently.

Depreciable assets are only evaluated for impairment upon a significant change in the operating or macroeconomic environment. In these circumstances, if an evaluation of the undiscounted cash flows indicates impairment, the asset is written down to its estimated fair value, which is based on discounted future cash flows. Useful lives are periodically evaluated to determine whether events or circumstances have occurred that indicate the need for revision.

### **Computer Software Developed or Obtained for Internal Use**

The Company follows the provisions of ASC 350, Intangibles - Goodwill and Other (“ASC 350”). The Company capitalizes costs of internally developed software incurred during the application development stage, which includes design, coding, installation and testing activities. The Company amortizes these costs over the period to which benefit is provided.

### **Impairment of Long-Lived Assets and Finite-Lived Intangible Assets**

We review our fixed assets and finite-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. When these indicator exists, we estimate undiscounted net future cash flows over the remaining life of such assets. If the total of the estimated cash flows is less than the carrying amount, an impairment would exist, which is measured based upon the difference between the carrying amount and the fair value of the assets.

### **Other Assets**

Other assets are comprised of the cost of various trade memberships and deferred charges.

### **Due to Miami International Holdings, Inc.**

The majority of all Company expenditures to date have been funded by the Parent. The Due to MIH balance represents the combination of allocated costs from current and prior years as well as the liability for allocated net assets.

Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace and facility for the trading of equity options, are primarily attributable to the Company, PEARL and Emerald. The Company’s allocated portion of costs is included in the accompanying statements of operations and member’s deficit. While equipment leasing costs are allocated to MIAX, PEARL and Emerald all other financing and capital raising costs are not allocated to the subsidiaries and are reflected solely in the Parent company financial statements. The Company considers changes in Due to MIH to be financing activity for purposes of the statements of cash flows.

### **Marketing Fees**

The Company facilitates the collection of marketing fees charged to market makers on certain customer trades executed at MIAX. These funds are accumulated in pools that are disbursed by the Company to

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

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order flow providers in accordance with instructions received from the market makers who are responsible for the pools. Pursuant to ASC 605-45, Revenue Recognition - Principal Agent Considerations, the Company reflects the assessments and payments on a net basis, with no impact on revenues or expenses. As of December 31, 2019 and 2018, amounts assessed by the Company on behalf of others are included in current assets and payments due to others included in current liabilities.

### Revenue Recognition

The Company's revenue recognition policies comply with ASC 605, Revenue Recognition ("ASC 605"). Revenue will be recognized when all of the following criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price to the buyer is fixed and determinable; and (4) collectability is reasonably assured. Revenue recognition policies for specific sources of revenue are discussed below:

*Transaction Fees:* Transaction fees are a function of three variables: (1) exchange fee rates; (2) overall industry trading volume; and (3) market share achieved by MIAX. Transaction fees are assessed on a per contract basis and are considered earned upon the execution of a trade and are recognized on a trade date basis. Transaction fees are recorded net of applicable volume discounts.

Rebates paid for certain customer transactions are recorded separately as a cost of revenue. In the event that member firms prepay for transaction fees, revenue is recognized as transaction fees are incurred.

*Access Fees:* Access fees represent fees assessed to MIAX members for the opportunity to trade and use other related functions of MIAX, including trading permits and connectivity. Access fees are recognized during the period the service is provided.

*Market Data Fees:* Market data revenue includes distributions from MIAX's participation in OPRA and is distributed based upon each individual exchange's market share of total options contracts cleared by the OCC. Market data revenue also includes MIAX's market data revenue earned from the sale of MIAX's Top of the Market ("TOM") data. Market data revenue is recognized in the period the data is provided.

*Regulatory Fees:* Regulatory fees include the Options Regulatory Fee ("ORF") and Section 31 fees. ORF is based on the number of customer contracts, as reported by OCC, executed or cleared by MIAX members on all US options exchanges and is recognized on a trade date basis. Section 31 fees of \$3,404,528 are also included in regulatory fees and are charged to MIAX members. Section 31 fees are used to offset similar fees charged to MIAX by the SEC which are included in trading operations costs.

### Income Taxes

MIAX is a single member limited liability company and was structured as a disregarded entity for U.S. federal, state and local income tax purposes. Accordingly, no provision for income taxes is made in MIAX's financial statements.

### Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue for Contracts with Customers (Topic 606). Upon the effective date, the ASU replaces almost all existing revenue recognition guidance, including industry specific guidance, in US GAAP. The standard provides a five-step analysis of transactions to determine when and how revenue is recognized, based upon the core principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the standard requires additional disclosures regarding

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

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the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB subsequently issued ASU 2015-14, Revenue from Contracts with Customers - Deferral of the Effective Date that resulted in a one year deferral of ASU 2014-09 for fiscal years beginning after December 15, 2018.

Early adoption is permitted for fiscal years beginning after December 15, 2016. The Company is currently evaluating the impact of the adoption of this standard on its financial statements but does not expect it to have a material impact, if any.

In February 2016, the FASB issued ASU 2016-02, which describes the principles for the recognition, measurement, presentation and disclosure of leases for both parties of the contract (both lessees and lessors). The new standard requires classifying leases as either finance or operating leases and will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease, respectively. Regardless of the classification, a lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months. This guidance is effective for reporting periods beginning after December 15, 2019, however early adoption is permitted. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements.

In June 2020, the FASB issued ASU 2020-05 guidance, which provides an optional one-year deferral of the effective date of ASC 606, Revenue from Contracts with customers, and ASC 842, Leases, for Companies that have not yet issued their financial statements reflecting the adoption of ASC 606 and ASC 842. The Company has elected to utilize this one year deferral and will continue evaluating the impact of these standards on our financial statements.

### 3. FIXED ASSETS

The Company's allocation of fixed assets is comprised of the following:

	<u>2019</u>	<u>2018</u>
Furniture and equipment	\$ 32,316,331	\$ 30,192,333
Software	1,399,873	1,349,834
Leasehold improvements	<u>917,953</u>	<u>0</u>
	34,634,157	31,542,167
Less - accumulated depreciation and amortization	<u>31,204,215</u>	<u>29,595,754</u>
	<u>3,429,942</u>	<u>1,946,413</u>
Capitalized internally developed software in-progress	<u>413,547</u>	<u>1,949,416</u>
	<u>\$ 3,843,489</u>	<u>\$ 3,895,829</u>

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## Notes to Financial Statements

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Depreciation expense for the years ended December 31, 2019 and 2018 was \$1,608,461 and \$2,521,218, respectively. Substantially all of the assets are pledged as described in Note 6.

#### 4. INTERNALLY DEVELOPED SOFTWARE

The Company capitalized \$7,641,115 and \$8,673,639 of development costs, net of amortization as of December 31, 2019 and 2018, respectively. Amortization expense of \$3,664,008 and \$3,658,288 was recorded in 2019 and 2018, respectively.

Future amortization of internally developed software is as follows:

##### Years Ending December 31,

2020	\$ 3,066,562
2021	2,421,239
2022	1,313,965
2023	712,850
2024	<u>126,499</u>
	<u>\$ 7,641,115</u>

#### 5. COMMITMENTS AND CONTINGENCIES

##### **Operating Leases**

The Parent leases space for its Princeton, New Jersey office under various operating lease agreements. The leases are for approximately 30,761 square feet (the “Princeton Premises”), originally expiring in May 31, 2020.

In April 2017, the Parent entered into an amendment for the lease for the Princeton Premises for an additional 18,550 square feet of office space for a term commencing on May 1, 2017 through March 31, 2026. The additional space will allow for the expansion of business activities.

In April 2017, the Parent additionally entered into a sublease for approximately 7,000 square feet used as a gym space in the same building as the Princeton Premises (“Fitness Center”). The lease term for the Fitness Center commenced on May 1, 2017 and continues through March 31, 2022

##### **Claims and Litigation**

On September 1, 2017, Nasdaq, Inc., Nasdaq ISE, LLC and FTEN, INC, (collectively, “Nasdaq”) filed an action (Civil Action No. 3:17-CV-06664) against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC (collectively, “MIH”) in the U.S. District Court for the District of New Jersey (the “District Court Proceeding”). The Complaint alleges patent infringement and trade secret misappropriation relating to Nasdaq’s electronic trading technology and platforms.

In March and April 2018, MIH filed seven petitions for Covered Business Method Review (“CMBR”) before the Patent Trial and Appeal Board at the United States Patent and Trademark Office (“USPTO”) seeking a determination that the subject patent is invalid under the current law. Nasdaq withdrew its claims

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

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on one of the seven patents, leaving the remaining six to be reviewed by the USPTO. As of November 13, 2018 the PTAB instituted CBMR procedures to review all patents-in-suit. In November 2018, MIH filed a motion to stay the District Court Proceedings pending resolution of the CBMRs, which was granted by the District Court on December 3, 2018. All claims asserted by Nasdaq against MIH under the six patents at issue were invalidated by the PTAB in October and November 2019 (the “MIH-Nasdaq PTAB Decisions”). On October 31, 2019, in an unrelated case, the U.S. Court of Appeals for the Federal Circuit (“CAFC”) issued a decision in *Arthrex v. Smith & Nephew*, 2019 WL 5616010, which held that the statutory scheme of appointing PTAB Administrative Patent Judges (“APJs”) violates the Appointments Clause of the United States Constitution. From October 31, 2019 through December 13, 2019 Nasdaq requested a rehearing of each of the MIH-Nasdaq PTAB Decisions based on *Arthrex*. No decision on such rehearing requests have been issued to date by the PTAB. On November 18, 2019 Nasdaq requested a lift of the Stay in the District Court Proceeding based on the MIH-Nasdaq PTAB Decisions, which request was denied by the Court on November 20, 2019. On February 7, 2020, Nasdaq filed a motion to amend the Complaint to drop the patent claims asserted by Nasdaq in the District Court Proceeding, which motion was objected to by MIH. No decision has been rendered by the Court on this motion to date. On May 7, 2020, the PTAB issued a General Order that, among other matters, the six patent matters in the MIH-Nasdaq PTAB Decisions be held in abeyance pending resolution of any certiorari petitions to the U.S. Supreme Court in *Arthrex*.

In the normal course of its business, the Company is exposed to asserted and unasserted claims. In the opinion of management, these matters will not have a material adverse effect on the Company’s financial position, results of operations or cash flows.

### Employees and Directors

The Parent has entered into employment agreements with certain employees. In addition to base salaries, the agreements provide for issuance of stock options, retention and, in part, incentive bonuses based on criteria established by the Board of Directors.

## 6. DEBT OBLIGATIONS

In June 2016, the Parent entered into a loan agreement with a lender to borrow \$30 million with a 5-year maturity at an interest rate that is 12.5% above LIBOR, which is set at a minimum of 1%. The initial rate of 13.5% was evaluated on a quarterly basis and adjusted for fluctuations in the LIBOR rate. In conjunction with the loan, the lender was granted a first priority lien against all of the assets of the Company. These assets include deposit accounts, documents, equipment, fixtures and improvements, general intangibles and intellectual property.

On December 31, 2018, the Parent borrowed an additional \$5 million from the lender and at the same time negotiated a postponement of the first scheduled semi-annual principal repayment of \$6 million, which was also due on that date.

In April 2019, the Parent refinanced the loan the same lender for a new principal amount of \$77 million in connection with the 2019 Loan Transaction. The new loan has a 5-year term maturing on April 26, 2024 with a fixed interest rate of 13.75%. Outstanding obligations under this loan, including capitalized interest payments (“PIK interest”), at December 31, 2019 was \$81,635,105. The Parent was in compliance with all covenant requirements through December 31, 2019.

The allocated debt obligations of the Company at December 31, 2019 and 2018 were \$140,645 and \$130,133, respectively which represented the remaining balance of a financing arrangement for annual insurance premiums and are included in Current Debt.

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## Notes to Financial Statements

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### Lease Agreements

During 2011, MIAX entered into a Master Lease Agreement (the “Lease Agreement”) with a vendor. Pursuant to the Lease Agreement, the vendor provided MIAX with an aggregate amount of \$19,328,892 in equipment financing. The interest rate under the Lease Agreement was 6.67% for a term of 48 months. In September, 2014 the Lease Agreement was amended to extend the maturity of the lease for an additional 18 months, maturing in August, 2017. The Amendment included an increase in the interest rate to 8.00% and provided the Lessor with a security interest by pledging the other assets of the Company. The Company considered subsequent measurement of the changes in the provisions of a capital lease and determined that no adjustment was required in the financial statements.

In November 2015, the Company entered into two additional subleases under the amended Master Lease agreement with the vendor and leased equipment valued at \$1,464,567 for a 23-month term and at \$206,716 for a 22-month term. Both subleases carry an interest rate of 15% and were accounted for as capital leases. In January 2016 the Parent entered into additional subleases with the same vendor for \$1.5 million of equipment at similar terms to provide two subleases.

In November 2017, the Parent entered into two additional subleases with the same vendor and leased equipment valued at \$2,284,718 for a 36-month term. Both subleases carry an interest rate of 9.57% and were accounted for as capital leases. The Company was allocated \$1,436,948 of this equipment lease.

In June 2018, the Parent entered into an additional sublease with the same vendor and leased equipment valued at \$2,117,897 for a 36-month term. In July 2018, the Parent entered into another sublease with the vendor and leased equipment valued at \$140,789 for a 36-month term. Both subleases carry an interest rate of 9.7% and were accounted for as capital leases. The Company was allocated \$76,878 of these equipment leases.

During 2019, the Parent entered into additional subleases with the same vendor and leased equipments valued at \$9,928,462 for a 36-month terms. These lease carries an interest rate of 11.12% and were accounted for as capital leases. The Company was allocated \$1,355,765 of these equipment lease.

In April 2016, the Parent entered into an equipment lease with a leasing company for equipment valued at \$1,160,191 for a 48-month term at an interest rate of 14.74%. The Company was allocated \$282,748 of this equipment lease. This lease was accounted for as capital lease.

Allocated obligations under all capital leases at December 31, 2019 and 2018 were \$1,654,504 and \$1,123,439, respectively. The accumulated amortization for all capital leases at December 31, 2019 and 2018 were \$23,364,230 and \$22,476,378, respectively.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

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Future minimum lease payments under these obligations at December 31, 2019 are:

**Years Ending December 31,**

2020	\$ 1,076,118
2021	549,040
2022	211,956
2023	<u>1,184</u>
Total future payments	1,838,298
Less interest	<u>183,795</u>
Net capital lease liability	<u>\$ 1,654,503</u>

## 7. EQUITY

MIAX is a single member limited liability company and has issued 100 membership units constituting 100% membership interest in the Company to MIH who is the Company's sole member. MIAX has not made any distributions for the period from February 27, 2008 (inception) through December 31, 2019.

### **Equity Rights Offering I**

As approved by the Board of Directors on September 27, 2013, the Parent authorized the issuance and sale of up to ten A-Units and up to ten B-Units to the members of the MIAX Options Exchange, with such Units having the terms set forth below ("Offering").

Each A-Unit consisted of (i) 101,695 shares (the "Shares") of common stock of the Parent, par value \$0.001 per share and a purchase price of \$5.00 per Share ("Common Stock") and (ii) common stock purchase warrants (the "A-Warrants") to purchase up to 2,182,639 shares of Common Stock.

Ten percent or 218,264 A-Warrants vested upon closing of the transaction and the remaining 1,964,375 A-Warrants vested over a 22.5 month period provided that the A-Unit Investor met the specific performance criteria set forth in the A-Warrant, which required that the A-Unit Investor trade an agreed-upon number of options contracts, subject to certain exceptions, on MIAX on a daily basis over a specified number of months.

Each B-Unit consisted of common stock purchase warrants (the "B-Warrants") to purchase 1,713,251 shares of Common Stock. In order to receive B-Warrants, an Investor participating in the B-Unit Offering had to prepay certain MIAX Exchange Fees in the amount of \$500,000 per B-Unit as set forth on the MIAX Options Exchange Fee Schedule ("MIAX Fees") for the 22-month period commencing October 1, 2013 and ending July 31, 2015 (the "Prepaid Fee Period").

The 1,713,521 B-Warrants vested commencing upon closing of the transaction up to a 22.5 month period provided that the B-Unit Investor met the specific performance criteria set forth in the B-Warrant, which required that the B-Unit Investor trade an agreed-upon number of options contracts, subject to certain exceptions, on MIAX on a daily basis over a specified number of months.

The A-Warrants and B-Warrants (together, the "Warrants") have an exercise period commencing upon vesting and expiring on the earlier of (i) August 31, 2020, or (ii) the two-year anniversary of a Qualified

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## Notes to Financial Statements

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Public Offering (an initial public offering of Common Stock under the Securities Act, where the offering price, net of underwriting discounts and commissions, exceeds \$250,000,000), or a merger of the Company with and into an unaffiliated entity or corporation. In the event of a Qualified Public Offering, merger or other liquidating event, it will result in the immediate vesting of all unvested Warrants that remain eligible to vest with the A-Unit Investor and B-Unit Investor (“Investor(s)” or “Offering Participant(s)”).

On September 30, 2013, the Parent entered into strategic alliances with an Investor to acquire one A-Unit and five Investors to acquire eight B-Units. As a result of the two transactions, the Company issued 101,695 shares of Common Stock to the A-Unit Investor described above for \$508,475 and received \$4,000,000 for prepaid MIA X fees from the B-Unit Investors described above.

### Equity Rights Offering II

On January 30, 2015, the Parent entered into a second Equity Rights offering with 7 strategic investors to acquire 18 D-Units for a total prepaid fee of \$4,500,000. These D-Units were similar in structure to the B-Units described above with a few notable exceptions. Each D-unit consisted of common stock purchase warrants to purchase 1,353,518 shares of common stock of the Parent and required a prepaid fee of \$250,000 instead of the \$500,000 that was stipulated in the B-Unit deal. The term of the transaction was for the 29-month period commencing February 1, 2015 and ending June 30, 2017.

The basic terms of the second offering were similar to those of the first offering, including the warrant vesting features and the exercise periods.

For the year ended December 31, 2017, the Parent recognized warrant expense of \$17,743,613 representing the fair market value associated with vested warrants due to the Offering Participants meeting their performance criteria in the second Equity Rights offering. This expense was allocated in its entirety to the Company and is included in financing related costs in the statement of operations and member’s deficit.

### Equity Rights Offering III

On June 30, 2017, the Parent entered into a third Equity Rights offering with 8 strategic investors to acquire 20 H-Units for a total prepaid fee of \$10,000,000. Each H-Unit consists of common stock purchase warrants to purchase 414,661 shares of common stock of the Parent and requires a prepaid fee of \$500,000, similar to that of ERP I. The term of the transaction is the 42-month period commencing July 1, 2017 and ending December 31, 2020. The basic terms of the third offering are similar to the first two offerings with the respect to warrant vesting features and exercise periods.

For the years ended December 31, 2019 and 2018, the Parent recognized warrant expense of \$4,425,167 and \$4,428,017, respectively, representing the fair market value associated with vested warrants due to the Offering Participants meeting their performance criteria in the third Equity Rights offering. These expenses were allocated in their entirety to the Company and are included in financing related costs in the statement of operations. Additionally, the Company amortized \$1,072,938 of the prepaid transaction fees to income during the year ended December 31, 2018.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

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December 31, 2019 and 2018

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### 8. EMPLOYEE BENEFIT PLAN

The Parent sponsors a voluntary defined contribution 401(k) plan, which covers substantially all of the Company's employees. Neither the Parent nor the Company Contributed to the 401(k) plan in 2019 or 2018.

### 9. DIRECTORS FEES

In April 2013, the Board of Directors of the Company approved the compensation amounts to be paid to Independent Directors and Committee Members of the Company for the period beginning January 1, 2013 until such time as the Board determines it is in the best interests of the Company to adopt new compensation terms (the "Director & Committee Fee Compensation"). Independent Directors and Committee Members of the Company are compensated as follows:

Independent Directors each receive \$50,000 for the year, pro rata. Committee Members each receive varying amounts, pro rata, depending on which committee(s) such Committee Member is appointed. The Director & Committee Fee Compensation is payable pursuant to the following two options: (i) a maximum of 50% cash payable quarterly and the balance in stock options to purchase Nonvoting Common Stock of the Company under the 2013 Stock Option and Incentive Plan for Non-Employee Directors, Committee Members and Members of the Board of Advisors (the "2013 Stock Option and Incentive Plan"), valued at the grant date, vesting quarterly and having a term of 10 years; or (ii) taking 100% of the Director & Committee Fee Compensation in Nonvoting Common Stock options under the 2013 Stock Option and Incentive Plan, valued at the grant date and vesting quarterly.

The number of options to be granted to Independent Directors is based the Director & Committee Fee Compensation divided by the value of each option under a theoretical valuation, and the exercise price applicable to each option is the fair market value ("FMV") at the time of the grant.

Additionally, an Independent Director (not a Committee Member) receives \$20,000 in value of Nonvoting Common Stock options under the 2013 Stock Option and Incentive Plan annually, commencing in the calendar year following his/her first year of board service, vesting quarterly and having a term of 10 years. The same theoretical valuation discussed above would be used to determine how many options would be granted to the Independent Director annually.

Additionally, a new Independent Director only (not a Committee Member), upon first appointment to the Board of Directors or the board of a subsidiary of the Company, will receive a grant of 50,000 Nonvoting Common Stock options under 2013 Stock Option and Incentive Plan that will fully vest after 9 months of service as a director to the Company with the exercise price being FMV on the grant date and having a term of 10 years.

### 10. SUBSEQUENT EVENTS

The Company has evaluated the possibility of subsequent events existing in the Company's financial statements through June 29, 2020, the date the financial statements were available to be issued. The Company has determined that there are no material events that would require disclosure in the Company's financial statements other than those listed below and elsewhere in these financial statement.

#### Equity Issuances

Since January 1, 2020, the Parent received proceeds of \$6,603,334 in connection with (i) the exercise of 5,095,203 warrants and (ii) the exercise of 133,333 stock options.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

December 31, 2019 and 2018

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### **COVID-19 Pandemic**

Since January 1, 2020, the spread of COVID-19 has severely impacted many local economies around the globe. In many countries, businesses are being forced to cease or limit operations for long or indefinite periods of time. Measures taken to contain the spread of the virus, including travel bans, quarantines, social distancing, and closures of non-essential services have triggered significant disruptions to businesses worldwide, resulting in an economic slowdown. Global stock markets have also experienced great volatility and a significant weakening. Governments and central banks have responded with monetary and fiscal interventions to stabilise economic conditions. In response, the Company implemented, and has been operating effectively under its Business Continuity Plan (“BCP Plan”) with nearly all staff working remotely. Despite the significant economic uncertainty, COVID-19 as not had an adverse impact on the Parent’s debt covenant compliance, nor on the Company’s ability to continue as a going concern. The duration and impact of the COVID-19 pandemic, as well as the effectiveness of government and central bank responses, remains unclear at this time. It is not possible to reliably estimate the duration and severity of these consequences, as well as their impact on the financial position and results of the Company for future periods.

Financial Statements and Report of  
Independent Certified Public Accountants

**MIAX PEARL, LLC**

December 31, 2019 and 2018

# MIAX PEARL, LLC

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**GRANT THORNTON LLP**

757 Third Avenue, 9<sup>th</sup> Floor  
New York, NY 10017

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**REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS**

Board of Directors  
MIAX PEARL, LLC

We have audited the accompanying financial statements of MIAX PEARL, LLC , which comprise the balance sheets as of December 31, 2019 and 2018, and the related statements of operations and member's deficit, and cash flows for the years then ended, and the related notes to the financial statements.

**Management's responsibility for the financial statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

**Auditor's responsibility**

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of MIAX PEARL, LLC as of December 31, 2019 and 2018, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

*Grant Thornton LLP*

New York, New York  
June 29, 2020

**MIAX PEARL, LLC**  
**Balance Sheets**  
**December 31, 2019 and 2018**

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	<u>2019</u>	<u>2018</u>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 6,009,661	\$ 35,307
Accounts receivable	2,501,318	868,572
Prepaid and other current assets	<u>1,515,196</u>	<u>915,263</u>
Total current assets	10,026,175	1,819,142
Fixed assets, net of depreciation and amortization	15,223,675	2,236,962
Internally developed software, net of amortization	3,753,337	3,932,280
Other assets	<u>1,467,740</u>	<u>1,654,265</u>
Total assets	<u>\$ 30,470,927</u>	<u>\$ 9,642,649</u>
<b>LIABILITIES AND MEMBER'S EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 3,206,755	\$ 1,060,285
Accrued compensation payable	3,438,191	1,190,721
Current debt	3,030,877	639,901
Deferred transaction revenues	<u>100,390</u>	<u>432,741</u>
Total current liabilities	9,776,213	3,323,648
Due to Miami International Holdings, Inc.	95,076,714	64,618,868
Long term debt	<u>5,013,235</u>	<u>389,487</u>
Total liabilities	109,866,162	68,332,003
Commitments and Contingencies (Note 5)		
<b>DEFICIT IN MEMBER'S EQUITY</b>		
Accumulated losses	<u>(79,395,235)</u>	<u>(58,689,354)</u>
Total member's deficit	<u>(79,395,235)</u>	<u>(58,689,354)</u>
Total liabilities and deficit in member's equity	<u>\$ 30,470,927</u>	<u>\$ 9,642,649</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX PEARL, LLC**  
**Statements of Operations and Member's Deficit**  
**December 31, 2019 and 2018**

	<b>Year Ended</b>	
	<b>December 31, 2019</b>	<b>December 31, 2018</b>
<b>REVENUES</b>		
Transaction fees	\$ 121,532,216	\$ 109,553,554
Access fees	8,391,861	3,568,785
Regulatory fees	14,608,836	7,176,912
Market data fees	4,581,614	3,255,005
Other revenue	<u>178,784</u>	<u>76,333</u>
Total revenues	149,293,311	123,630,589
<b>COST OF REVENUES</b>		
Transaction rebates	<u>(119,996,755)</u>	<u>(114,680,701)</u>
<b>NET REVENUES</b>	<u>29,296,556</u>	<u>8,949,888</u>
<b>OPERATING EXPENSES INCURRED DIRECTLY OR ALLOCATED FROM PARENT</b>		
Employee compensation and benefits	19,965,214	8,545,540
Information technology and communication costs	3,867,867	3,698,440
Depreciation and amortization	4,073,906	4,783,245
Occupancy costs	1,564,405	581,783
Professional services	1,507,324	188,548
Regulatory services fees	1,310,830	879,812
Financial and banking consulting services	250,826	478,695
Trading operations costs	6,399,957	5,788,535
Share based compensation to third parties	33,363	41,671
Directors' fees	501,795	482,511
Other	<u>1,438,579</u>	<u>799,287</u>
Total operating expenses	<u>40,914,066</u>	<u>26,268,067</u>
<b>OPERATING LOSS</b>	<u>(11,617,510)</u>	<u>(17,318,179)</u>
Interest expense	(327,821)	(140,507)
Financing related costs	<u>(8,760,550)</u>	<u>(4,972,145)</u>
<b>NET LOSS</b>	<u>(20,705,881)</u>	<u>(22,430,831)</u>
Member's deficit at beginning of year	<u>(58,689,354)</u>	<u>(36,258,523)</u>
Member's deficit at end of year	<u>\$ (79,395,235)</u>	<u>\$ (58,689,354)</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX PEARL, LLC**  
**Statements of Cash Flows**  
**December 31, 2019 and 2018**

	<b>Years Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (20,705,881)	\$ (22,430,831)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	4,073,906	4,783,245
Changes in operating assets and liabilities		
Accounts receivable	(1,632,745)	(681,949)
Prepaid and other current assets	(599,933)	357,687
Other assets	(93,105)	825,068
Accounts payable and other liabilities	2,146,470	(530,187)
Accrued compensation payable	2,247,470	(534,180)
Deferred transaction revenue	(332,351)	432,741
Net cash used in operating activities	<u>(14,896,169)</u>	<u>(17,778,406)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	<u>(8,390,618)</u>	<u>(570,941)</u>
Net cash used in investing activities	<u>(8,390,618)</u>	<u>(570,941)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Proceeds from debt	123,539	109,758
Repayments of term debt	(1,320,244)	(1,085,108)
Due to Miami International Holdings, Inc.	<u>30,457,846</u>	<u>19,220,799</u>
Net cash provided by financing activities	<u>29,261,141</u>	<u>18,245,449</u>
Increase (decrease) in cash and cash equivalents	5,974,354	(103,898)
Cash and cash equivalents at beginning of year	<u>35,307</u>	<u>139,205</u>
Cash and cash equivalents at end of year	<u>\$ 6,009,661</u>	<u>\$ 35,307</u>
Cash paid during the year for interest	<u>\$ 322,222</u>	<u>\$ 140,507</u>
Non-cash investing activities		
Assets acquired under capital leases	\$ 8,211,429	\$ 76,878
Non-cash amount related to capitalized internally developed software	<u>356,680</u>	<u>26,471</u>
Total non-cash investing activities	<u>\$ 8,568,109</u>	<u>\$ 103,349</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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**1. ORGANIZATION AND OPERATIONS**

MIAX PEARL, LLC (“PEARL” or the “Company”) was formed in the State of Delaware on February 11, 2016 and is a wholly-owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), and an affiliate of Miami International Securities Exchange, LLC (“MIAX”), Miami International Technologies, LLC (“MIAX Technologies”), Miami International Futures Exchange, LLC (“MIAX Futures”) and MIAX Global, LLC. PEARL provides a marketplace and facilities for the trading of equity options products for its members and employs a price-time priority model. MIAX, the Parent’s first options exchange, employs a pro-rata market model. Emerald, a third equity options exchange which launched on March 1, 2019 is a hybrid of the first two exchanges, with a pro-rata market model similar to that of MIAX, combined with maker-taker pricing which is offered by PEARL. MIAX Futures intends to provide a marketplace and facilities for the trading of futures products for its members, but is currently inactive. MIAX Technologies will sell or license trading technology. MIAX Global focuses on merger, acquisition and joint venture activities of MIH.

On December 13, 2016, the Company received an Approval Order from The United States Securities and Exchange Commission (“SEC”) of its application for registration as a National Securities Exchange and began trading equity options on February 6, 2017.

In 2019, the Company commenced plans to launch MIAX PEARL Equities (“PEARL Equities”), a cash equities exchange under the Company’s existing exchange license. PEARL Equities is expected to launch in September 2020, subject to SEC approval (see Note 7 – Equity Rights Offering V).

Due to the fact that the Company has incurred a cumulative loss of approximately \$79 million from February 11, 2016 (date of inception) to December 31, 2019, substantial doubt was raised in the past about the Company’s ability to continue as a going concern. These periodic shortfalls were covered through capital raises and short-term borrowing but the Company’s continuation as a going concern was dependent on its ability to obtain these forms of additional financing.

In an effort to address the conditions and events that gave rise to this situation, the Parent implemented a plan that included a refinancing with its current lender which has provided a substantial cash surplus for the next 12-24 month period. This new loan agreement for \$77 million (of which approximately \$43 million was utilized to repay the outstanding debt with the same lender), is described in more detail in Note 6. To further ensure that the three exchange subsidiaries adequately fund their operations and fulfill their obligations, the parent company, MIH has executed separate funding agreements with MIAX, PEARL and Emerald which provide for seed capital and guarantee ongoing financial support.

Based on the developments outlined above which have substantially enhanced the Company’s cash position as well as the projected results for the next twelve months, management has concluded that there is sufficient liquidity to mitigate the risk that the Company can continue as a going concern. This is based on the following:

- Strong cash position which will provide a cushion in the event that actual results fall short of projections.
- Continued revenue and market share growth.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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- Expansion to a business model that includes diversified revenue streams.
- Availability of additional funding from the current lender as well as an equipment financing option to build the equities exchange.

In the event that these steps are not effective and there is a liquidity shortfall, management has other contingency plans and options that are available that would include reducing costs, raising additional capital or expanding current refinancing. There can be no assurance as to the availability or terms upon which such financing and capital might be available.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

### **Basis of Presentation**

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“US GAAP”).

### **Use of Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

### **Cash and Cash Equivalents**

All highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents.

The Company periodically maintains cash balances at financial institutions in excess of the \$250,000 Federal Deposit Insurance Corporation insurance limit. As of December 31, 2019 and 2018 cash and cash equivalents were held at major financial institutions. Cash and cash equivalents approximate fair value. It is the Company’s policy to monitor the credit standing of the financial institutions with which it conducts business.

### **Prepaid Expenses**

Prepaid expenses primarily consist of prepaid software maintenance fees and insurance which are amortized over the respective periods.

### **Accounts Receivable**

Accounts receivable consists primarily of transaction, access and regulatory fees and the Company’s share of distributable revenue receivable from the Options Price Reporting Authority (“OPRA”). Accounts receivable are primarily collected through the Options Clearing Corporation (“OCC”) and are with large, highly-rated clearing firms; therefore concentrations of credit risk are limited. The Company has no financing related receivables.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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**Fixed Assets**

Fixed assets are recorded at cost. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets ranging from three to five years. Fixed assets acquired under capital leases are depreciated over the life of the lease.

Leasehold improvements are amortized over the estimated useful lives of the improvements or the remaining terms of the leases, whichever is less. Any gain or loss on the retirement of assets is recognized currently.

Depreciable assets are only evaluated for impairment upon a significant change in the operating or macroeconomic environment. In these circumstances, if an evaluation of the undiscounted cash flows indicates impairment, the asset is written down to its estimated fair value, which is based on discounted future cash flows. Useful lives are periodically evaluated to determine whether events or circumstances have occurred that indicate the need for revision.

**Computer Software Developed or Obtained for Internal Use**

The Company follows the provisions of ASC 350, Intangibles - Goodwill and Other (“ASC 350”). The Company capitalizes costs of internally developed software incurred during the application development stage, which includes design, coding, installation and testing activities. The Company amortizes these costs over the period to which benefit is provided.

**Impairment of Long-Lived Assets and Finite-Lived Intangible Assets**

We review our fixed assets and finite-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. When these indicator exists, we estimate undiscounted net future cash flows over the remaining life of such assets. If the total of the estimated cash flows is less than the carrying amount, an impairment would exist, which is measured based upon the difference between the carrying amount and the fair value of the assets.

**Other Assets**

Other assets are comprised of the cost of various trade memberships and deferred charges.

**Due to Miami International Holdings, Inc.**

The majority of all of the Company’s expenditures to date have been funded by the Parent. The Due to MIH balance represents the combination of allocated costs for the current period as well as the liability for allocated net assets.

Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace and facility for the trading of equity options, are primarily attributable to the Company, MIAX and Emerald. The Company’s allocated portion of cost are included in the accompanying statements of operations and member’s deficit. While equipment leasing costs are allocated to MIAX, PEARL and Emerald, all other financing and capital raising costs are not allocated to the subsidiaries and are reflected solely in the Parent company financial statements. The Company considers changes in Due to MIH to be financing activity for purposes of the statements of cash flows.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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**Revenue Recognition**

The Company's revenue recognition policies comply with ASC 605, Revenue Recognition ("ASC 605"). Revenue will be recognized when all of the following criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price to the buyer is fixed and determinable; and (4) collectability is reasonably assured. Revenue recognition policies for specific sources of revenue are discussed below:

*Transaction Fees:* Transaction fees are a function of three variables: (1) exchange fee rates; (2) overall industry trading volume; and (3) market share achieved by PEARL. Transaction fees are assessed on a per contract basis and are considered earned upon the execution of a trade and are recognized on a trade date basis. Transaction fees are recorded net of applicable volume discounts.

Rebates paid for certain customer transactions are recorded separately as a cost of revenue. In the event that member firms prepay for transaction fees, revenue is recognized as transaction fees are incurred.

*Access Fees:* Access fees represent fees assessed to PEARL members for their connections to the PEARL servers. These fees are recognized during the period the service is provided.

*Market Data Fees:* Market data revenue is comprised of distributions from PEARL's participation in OPRA and is distributed based upon each individual exchange's market share of total options contracts cleared by the OCC.

*Regulatory Fees:* Regulatory fees include the Options Regulatory Fee ("ORF") and Section 31 fees. ORF is based on the number of customer contracts, as reported by OCC, executed or cleared by PEARL members on all US options exchanges and is recognized on a trade date basis. Section 31 fees of \$4,294,124 are also included in regulatory fees and are charged to MIAX PEARL members. Section 31 fees are used to offset similar fees charged to PEARL by the SEC which are included in trading operations costs.

*Deferred Transaction Revenue:* The Company has classified amounts totaling \$100,390 representing prepaid PEARL fees (see Note 7 – Equity Rights Offering IV) as deferred revenue at December 31, 2019. Deferred revenue is amortized to income over the applicable future periods as transaction fees are earned.

**Income Taxes**

PEARL is a single member limited liability company and was structured as a disregarded entity for U.S. federal, state and local income tax purposes. Accordingly, no provision for income taxes is made in PEARL's financial statements.

**Recent Accounting Pronouncements**

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue for Contracts with Customers (Topic 606). Upon the effective date, the ASU replaces almost all existing revenue recognition guidance, including industry specific guidance, in US GAAP. The standard provides a five-step analysis of transactions to determine when and how revenue is

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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recognized, based upon the core principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the standard requires additional disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB subsequently issued ASU 2015-14, Revenue from Contracts with Customers - Deferral of the Effective Date that resulted in a one year deferral of ASU 2014-09 for fiscal years beginning after December 15, 2018. Early adoption is permitted for fiscal years beginning after December 15, 2016. The Company is currently evaluating the impact of the adoption of this standard on its financial statements but does not expect it to have a material impact, if any.

In February 2016, the FASB issued ASU 2016-02, which describes the principles for the recognition, measurement, presentation and disclosure of leases for both parties of the contract (both lessees and lessors).

The new standard requires classifying leases as either finance or operating leases and will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease, respectively. Regardless of the classification, a lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months. This guidance is effective for reporting periods beginning after December 15, 2019, however early adoption is permitted. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements.

In June 2020, the FASB issued ASU 2020-05 guidance, which provides an optional one-year deferral of the effective date of ASC 606, Revenue from Contracts with customers, and ASC 842, Leases, for Companies that have not yet issued their financial statements reflecting the adoption of ASC 606 and ASC 842. The Company has elected to utilize this one year deferral and will continue evaluating the impact of these standards on our financial statements.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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**3. FIXED ASSETS**

The Company's allocation of fixed assets is comprised of the following:

	<u>2019</u>	<u>2018</u>
Furniture and equipment	\$ 20,137,810	\$ 9,996,454
Software	286,342	208,440
Leasehold improvements	<u>1,835,905</u>	<u>0</u>
	22,260,057	10,204,894
Less - accumulated depreciation and amortization	<u>10,736,359</u>	<u>8,276,225</u>
	<u>11,523,698</u>	<u>1,928,669</u>
Capitalized internally developed software in-progress	<u>3,699,977</u>	<u>308,293</u>
	<u>\$ 15,223,675</u>	<u>\$ 2,236,962</u>

Depreciation expense for the years ended December 31, 2019 and 2018 was \$2,739,764 and \$3,581,915, respectively. Substantially all of the assets are pledged as described in Note 6.

**4. INTERNALLY DEVELOPED SOFTWARE**

The Company capitalized \$3,753,337 and \$3,932,280 of development costs, net of amortization as of December 31, 2019 and 2018, respectively. Amortization expense of \$1,334,143 and \$1,201,330 were recorded in 2019 and 2018, respectively.

Future amortization of internally developed software is as follows:

2020	\$ 1,461,615
2021	1,451,287
2022	452,677
2023	260,285
2024	<u>127,473</u>
	<u>\$ 3,753,337</u>

## **5. COMMITMENTS AND CONTINGENCIES**

### **Operating Leases**

The Parent leases space for its Princeton, New Jersey office under various operating lease agreements. The leases are for approximately 30,761 square feet (the “Princeton Premises”) and continue through May 31, 2020.

In April 2017, the Parent entered into an amendment for the lease for the Princeton Premises for an additional 18,550 square feet of office space for a term commencing on May 1, 2017 through March 31, 2026. The additional space will allow for the expansion of business activities.

In April 2017, the Parent additionally entered into a sublease for approximately 7,000 square feet used as a gym space in the same building as the Princeton Premises (“Fitness Center”). The lease term for the Fitness Center commenced on May 1, 2017 and continues through March 31, 2022.

### **Claims and Litigation**

On September 1, 2017, Nasdaq, Inc., Nasdaq ISE, LLC and FTEN, INC, (collectively, “Nasdaq”) filed an action (Civil Action No. 3:17-CV-06664) against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC (collectively, “MIH”) in the U.S. District Court for the District of New Jersey (the “District Court Proceeding”). The Complaint alleges patent infringement and trade secret misappropriation relating to Nasdaq’s electronic trading technology and platforms.

In March and April 2018, MIH filed seven petitions for Covered Business Method Review (“CMBR”) before the Patent Trial and Appeal Board at the United States Patent and Trademark Office (“USPTO”) seeking a determination that the subject patent is invalid under the current law. Nasdaq withdrew its claims on one of the seven patents, leaving the remaining six to be reviewed by the USPTO. As of November 13, 2018 the PTAB instituted CBMR procedures to review all patents-in-suit. In November 2018, MIH filed a motion to stay the District Court Proceedings pending resolution of the CBMRs, which was granted by the District Court on December 3, 2018. All claims asserted by Nasdaq against MIH under the six patents at issue were invalidated by the PTAB in October and November 2019 (the “MIH-Nasdaq PTAB Decisions”). On October 31, 2019, in an unrelated case, the U.S. Court of Appeals for the Federal Circuit (“CAFC”) issued a decision in *Arthrex v. Smith & Nephew*, 2019 WL 5616010, which held that the statutory scheme of appointing PTAB Administrative Patent Judges (“APJs”) violates the Appointments Clause of the United States Constitution. From October 31, 2019 through December 13, 2019 Nasdaq requested a rehearing of each of the MIH-Nasdaq PTAB Decisions based on *Arthrex*. No decision on such rehearing requests have been issued to date by the PTAB. On November 18, 2019 Nasdaq requested a lift of the Stay in the District Court Proceeding based on the MIH-Nasdaq PTAB Decisions, which request was denied by the Court on November 20, 2019. On February 7, 2020, Nasdaq filed a motion to amend the Complaint to drop the patent claims asserted by Nasdaq in the District Court Proceeding, which motion was objected to by MIH. No decision has been rendered by the Court on this motion to date. On May 7, 2020, the PTAB issued a General Order that, among other matters, the six patent matters in the MIH-Nasdaq PTAB Decisions be held in abeyance pending resolution of any certiorari petitions to the U.S. Supreme Court in *Arthrex*.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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In the normal course of its business, the Company is exposed to asserted and unasserted claims. In the opinion of management, these matters will not have a material adverse effect on the Company's financial position, results of operations or cash flows.

**Employees and Directors**

The Parent has entered into employment agreements with certain employees. In addition to base salaries, the agreements provide for issuance of stock options, retention and, in part, incentive bonuses based on criteria established by the Board of Directors.

**6. DEBT OBLIGATIONS**

In June 2016, the Parent entered into a loan agreement with a lender to borrow \$30 million with a 5-year maturity at an interest rate that is 12.5% above LIBOR, which is set at a minimum of 1%. The initial rate of 13.5% was evaluated on a quarterly basis and adjusted for fluctuations in the LIBOR rate. In conjunction with the loan, the lender was granted a first priority lien against all of the assets of the Company. These assets include deposit accounts, documents, equipment, fixtures and improvements, general intangibles and intellectual property.

On December 31, 2018, the Parent borrowed an additional \$5 million from the lender and at the same time negotiated a postponement of the first scheduled semi-annual principal repayment of \$6 million, which was also due on that date.

In April 2019, the Parent refinanced the loan the same lender for a new principal amount of \$77 million in connection with the 2019 Loan Transaction. The new loan has a 5-year term maturing on April 26, 2024 with a fixed interest rate of 13.75%. Outstanding obligations under this loan, including capitalized interest payments ("PIK interest"), at December 31, 2019 was \$81,635,105. The Parent was in compliance with all covenant requirements through December 31, 2019.

The allocated debt obligations of the Company at December 31, 2019 and 2018 were \$123,539 and \$109,758 which represented the remaining balance of a financing arrangement for annual insurance premiums and are include in Current Debt.

**Lease Agreements**

In January 2016, the Parent entered into two additional leases with an existing vendor and leased equipments valued at \$1.5 million for a 24-month term. Both leases carry an interest rate of 15% and were accounted for as capital leases. Both leases were allocated in their entirety to the Company.

In November 2017, the Parent entered into two additional subleases with the same vendor and leased equipment valued at \$2,284,718 for a 36-month term. Both subleases carry an interest rate of 9.57% and were accounted for as capital leases. The Company was allocated \$847,771 of this equipment lease.

In June 2018, the Parent entered into an additional sublease with the same vendor and leased equipment valued at \$2,117,897 for a 36-month term. In July 2018, the Parent entered into another sublease with the vendor and leased equipment valued at \$140,789 for a 36-month term. Both subleases carry an interest rate

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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of 9.7% and were accounted for as capital leases. The Company was allocated \$76,878 of these equipment leases.

During 2019, the Parent entered into additional subleases with the same vendor and leased equipments valued at \$9,928,462 for a 36-month terms. These lease carries an interest rate of 11.12% and were accounted for as capital leases. The Company was allocated \$8,190,629 of these equipment lease.

In April 2016, the Parent entered into an equipment lease with a leasing company for equipment valued at \$1,160,191 for a 48-month term at an interest rate of 14.74%. The Company was allocated \$877,443 of this equipment lease. This lease was accounted for as capital lease.

Allocated obligations under all capital leases at December 31, 2019 and 2018 were \$7,920,574 and \$919,630, respectively. The accumulated amortization for all capital leases at December 31, 2019 and 2018 were \$5,579,688 and \$4,128,237, respectively.

Future minimum lease payments under these obligations at December 31, 2019 are:

**Years Ending December 31,**

2020	\$ 3,638,794
2021	3,241,763
2022	2,285,036
2023	<u>2,368</u>
Total future payments	9,167,961
Less interest	<u>1,247,387</u>
Net capital lease liability	<u>\$ 7,920,574</u>

**7. EQUITY**

PEARL is a single member limited liability company and has issued 100 membership units constituting 100% membership interest in the Company to MIH who is the Company's sole member. PEARL has not made any distributions for the period from February 11, 2016 (inception) through December 31, 2019.

**Equity Rights Offering IV**

As approved by the Board of Directors on April 24, 2018, the Parent authorized the issuance and sale of up to two (2) I-Units and up to twenty-five (25) J-Units to the members of PEARL Exchange.

On April 30, 2018, the Company entered into a fourth Equity Rights offering with 10 strategic investors to acquire 25 J-Units for a total prepaid fee of \$6,250,000.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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Each J-Unit consists of common stock purchase warrants to purchase 416,344 shares of common stock of the Company and requires a prepaid fee of \$250,000, similar to that of MIAX ERP II. The term of the transaction is the 32-month period commencing May 1, 2018 and ending December 31, 2020. The basic terms of the fourth offering are similar to the first two offerings with the respect to warrant vesting features and exercise periods.

For the years ended December 31, 2019 and 2018, the Parent recognized warrant expense of \$8,760,550 and \$4,972,146, respectively, representing the fair market value associated with vested warrants due to the Offering Participants meeting their performance criteria in the fourth Equity Rights offering. These expenses were allocated in their entirety to the Company and are included in financing related costs in the statement of operations. Additionally, the Company amortized \$332,351 and \$5,817,259 of the prepaid transaction fees to income during the years ended December 31, 2019 and 2018, respectively, leaving an unamortized balance of \$100,390.

**Equity Rights Program V**

In May 2019, the Parent entered into agreements providing for the issuance of warrants to purchase a total of 5,768,750 shares of Common Stock to seven firms in consideration for the prepayment of certain exchange fees to PEARL once the MIAX PEARL Equities exchange is operational and following the satisfaction of certain closing conditions including the effectiveness of SEC rule filings required in connection therewith.

**8. EMPLOYEE BENEFIT PLAN**

The Parent sponsors a voluntary defined contribution 401(k) plan, which covers substantially all of the Company's employees. Neither the Parent nor the Company contributed to the 401(k) plan in 2019 or 2018.

**9. DIRECTORS FEES**

In September 2016, the Board of Directors of the Company approved the compensation amounts to be paid to Independent Directors and Committee Members of the Company for the period beginning May 1, 2016 until such time as the Board determines it is in the best interests of the Company to adopt new compensation terms (the "Director & Committee Fee Compensation"). Independent Directors and Committee Members of the Company are compensated as follows:

Independent Directors and Committee Members of PEARL who also serve in the same capacity for another MIH Self-Regulatory Organization ("SRO") subsidiary each shall receive a rate of one-half of such compensation paid by the Company SRO subsidiary for the year, pro rata. Independent Directors serving in a sole capacity for PEARL, each receive \$50,000 for the year, pro rata. Committee Members each receive varying amounts, pro rata, depending on which committee(s) such Committee Member is appointed. The Director & Committee Fee Compensation is payable pursuant to the following two options: (i) a maximum of 50% cash payable quarterly and the balance in stock options to purchase Nonvoting Common Stock of the Company under the 2013 Stock Option and Incentive Plan for Non-Employee Directors, Committee

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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Members and Members of the Board of Advisors (the “2013 Stock Option and Incentive Plan”), valued at the grant date, generally vesting quarterly and having a term of 10 years; or (ii) taking 100% of the Director & Committee Fee Compensation in Nonvoting Common Stock options under the 2013 Stock Option and Incentive Plan, valued at the grant date and generally vesting quarterly.

The number of options to be granted to Independent Directors is based the Director & Committee Fee Compensation divided by the value of each option under a theoretical valuation, and the exercise price applicable to each option is the fair market value (“FMV”) at the time of the grant.

Additionally, an Independent Director (not a Committee Member) serving in a sole capacity for the Company receives \$20,000 in value of Nonvoting Common Stock options and an Independent Director (not a Committee Member) who also serves in the same capacity for another Company SRO subsidiary shall receive \$10,000 in value of Nonvoting Common Stock option paid by the Company SRO subsidiary under the 2013 Stock Option and Incentive Plan annually, commencing in the calendar year following his/her first year of board service, vesting quarterly and having a term of 10 years. The same theoretical valuation discussed above would be used to determine how many options would be granted to the Independent Director annually.

Additionally, a new Independent Director only (not a Committee Member) serving in a sole capacity for the Company, upon first appointment to the Board of Directors or the board of a subsidiary of the Company, will receive a grant of 50,000 Nonvoting Common Stock options under 2013 Stock Option and Incentive Plan that will fully vest after 9 months of service as a director to the Company with the exercise price being FMV on the grant date and having a term of 10 years.

## **10. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company’s financial statements through June 29, 2020, the date the financial statements were available to be issued. The Company has determined that there are no material events that would require disclosure in the Company’s financial statements other than those listed below and elsewhere in these financial statement.

### **Equity Issuances**

Since January 1, 2020, the Parent received proceeds of \$6,603,334 in connection with (i) the exercise of 5,095,203 warrants and (ii) the exercise of 133,333 stock options.

### **COVID-19 Pandemic**

Since January 1, 2020, the spread of COVID-19 has severely impacted many local economies around the globe. In many countries, businesses are being forced to cease or limit operations for long or indefinite periods of time. Measures taken to contain the spread of the virus, including travel bans, quarantines, social distancing, and closures of non-essential services have triggered significant disruptions to businesses worldwide, resulting in an economic slowdown. Global stock markets have also experienced great volatility and a significant weakening. Governments and central banks have responded with monetary and fiscal interventions to stabilise economic conditions. In response, the Company implemented, and has been

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2019 and 2018**

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operating effectively under its Business Continuity Plan (“BCP Plan”) with nearly all staff working remotely. Despite the significant economic uncertainty, COVID-19 as not had an adverse impact on the Parent’s debt covenant compliance, nor on the Company’s ability to continue as a going concern. The duration and impact of the COVID-19 pandemic, as well as the effectiveness of government and central bank responses, remains unclear at this time. It is not possible to reliably estimate the duration and severity of these consequences, as well as their impact on the financial position and results of the Company for future periods.

**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**

**Financial Statements  
December 31, 2019 and 2018**

**(Unaudited)**

**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**  
**BALANCE SHEETS**  
**(UNAUDITED)**

	<b>2019</b>	<b>2018</b>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 30,862	\$ 41,943
Accounts receivable	47,450	45,000
Prepaid and other current assets	6,599	4,500
Total current assets	84,911	91,443
Fixed assets, net of depreciation and amortization	124,004	-
Other assets	3,489	3,882
Total assets	\$ 212,404	\$ 95,325
<b>LIABILITIES AND MEMBER'S EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 45,927	\$ 37,306
Accrued compensation payable	249,089	237,459
Current debt	250	-
Total current liabilities	295,266	274,765
Due to Miami International Holdings, Inc.	11,414,004	9,959,053
Long term debt	648	-
Total liabilities	11,709,918	10,233,818
<b>DEFICIT IN MEMBER'S EQUITY</b>		
Accumulated losses	(11,497,514)	(10,138,493)
Total member's deficit	(11,497,514)	(10,138,493)
Total liabilities and deficit in member's equity	\$ 212,404	\$ 95,325

**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**  
**STATEMENTS OF OPERATIONS**  
**(UNAUDITED)**

	<b>Years Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
<b>REVENUES</b>		
Other revenue	\$ 276,232	\$ 279,000
Total revenues	<u>276,232</u>	<u>279,000</u>
<b>OPERATING EXPENSES</b>		
Employee compensation and benefits	1,239,465	1,598,255
Information technology and communication costs	2,829	2,056
Depreciation and amortization	8,791	-
Occupancy costs	33,015	31,509
Professional services	183,146	-
Financial and banking consulting services	139,362	129,861
Share based compensation to third parties	7,725	3,564
Other	<u>20,896</u>	<u>21,625</u>
Total operating expenses	<u>1,635,229</u>	<u>1,786,870</u>
<b>OPERATING LOSS</b>	<u>(1,358,997)</u>	<u>(1,507,870)</u>
Interest expense	<u>(24)</u>	<u>-</u>
<b>NET LOSS</b>	<u>\$ (1,359,021)</u>	<u>\$ (1,507,870)</u>
Member's deficit at beginning of year	<u>(10,138,493)</u>	<u>(8,630,623)</u>
Member's deficit at end of year	<u>\$ (11,497,514)</u>	<u>\$ (10,138,493)</u>

**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**  
**STATEMENTS OF CASH FLOWS**  
**(UNAUDITED)**

	<b>Years Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (1,359,021)	\$ (1,507,870)
Depreciation and amortization	8,791	-
Adjustments to reconcile net loss to net cash provided by (used in) operating activities		
Changes in operating assets and liabilities		
Accounts receivable	(2,450)	-
Prepaid and other current assets	(2,099)	(331)
Other assets	393	3,623
Accounts payable and other liabilities	8,621	(13,355)
Accrued compensation payable	11,630	(185,354)
Net cash provided by (used in) operating activities	(1,334,135)	(1,703,287)
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	(131,755)	-
Net cash used in investing activities	(131,755)	-
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Repayments of term debt	(142)	-
Due to Miami International Holdings, Inc.	1,454,951	1,707,688
Net cash provided by (used in) financing activities	1,454,809	1,707,688
Increase in cash and cash equivalents	(11,081)	4,401
Cash and cash equivalents at beginning of year	41,943	37,542
Cash and cash equivalents at end of year	\$ 30,862	\$ 41,943
<b>Non-cash investing activities</b>		
Assets acquired under capital leases	\$ 1,040	\$ -
Total non-cash investing activities	\$ 1,040	\$ -

**M 44 Holdings, LLC**  
**Financial Statements**  
**December 31, 2019**  
**(Unaudited)**

**M 44 Holdings, LLC**  
**BALANCE SHEET**  
**(UNAUDITED)**

	<u>2019</u>
<b>ASSETS</b>	
CURRENT ASSETS	
Other assets	\$ 217,400
Total assets	<u>\$ 217,400</u>
<b>LIABILITIES AND MEMBER'S EQUITY</b>	
Due to Miami International Holdings, Inc.	<u>217,400</u>
Total liabilities	217,400
DEFICIT IN MEMBER'S EQUITY	
Accumulated losses	<u>-</u>
Total member's deficit	<u>-</u>
Total liabilities and deficit in member's equity	<u>\$ 217,400</u>

**M 44 Holdings, LLC**  
**STATEMENT OF CASH FLOWS**  
**(UNAUDITED)**

	<b><u>Year Ended</u></b> <b><u>December 31, 2019</u></b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>	
Net loss	\$ -
Adjustments to reconcile net loss to net cash provided by (used in) operating activities	
Changes in operating assets and liabilities	
Other assets	<u>(217,400)</u>
Net cash used in operating activities	<u>(217,400)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>	
Capital expenditures	<u>-</u>
Net cash used in investing activities	<u>-</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>	
Due to Miami International Holdings, Inc.	<u>217,400</u>
Net cash provided by (used in) financing activities	<u>217,400</u>
Increase (decrease) in cash and cash equivalents	-
Cash and cash equivalents at beginning of year	<u>\$ -</u>
Cash and cash equivalents at end of year	<u><u>\$ -</u></u>

**THE BERMUDA STOCK EXCHANGE**

**Financial Statements**  
(UNAUDITED)

Year ended December 31, 2019

## THE BERMUDA STOCK EXCHANGE

### Balance Sheet

December 31, 2019

(Unaudited, expressed in Bermuda Dollars)

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	<u>2019</u>	<u>2018</u>
<b>Current assets</b>		
Cash and cash equivalents	\$ 653,353	\$ 1,265,947
Term deposit	1,527,459	759,868
Accounts receivable	166,529	93,781
Prepaid expenses	<u>105,566</u>	<u>96,833</u>
Total current assets	<u>2,452,907</u>	<u>2,216,429</u>
Property, plant and equipment	<u>17,974</u>	<u>16,292</u>
Total assets	<u>\$ 2,470,881</u>	<u>\$ 2,232,721</u>
<b>Liabilities and equity</b>		
<b>Current liabilities</b>		
Deferred income	\$ 663,389	\$ 649,959
Accounts payable and accrued liabilities	<u>193,429</u>	<u>190,211</u>
Total current liabilities	<u>856,818</u>	<u>840,170</u>
<b>Equity</b>		
Share capital	1,355,034	1,355,034
Contributed surplus	2,434,432	2,434,432
Deficit	<u>(2,175,403)</u>	<u>(2,396,915)</u>
Total equity	<u>1,614,063</u>	<u>1,392,551</u>
Total liabilities and equity	<u>\$ 2,470,881</u>	<u>\$ 2,232,721</u>

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## THE BERMUDA STOCK EXCHANGE

### Statement of Operations and Deficit

Year ended December 31, 2019  
(Unaudited, expressed in Bermuda Dollars)

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	<u>2019</u>	<u>2018</u>
<b>Revenue</b>		
Listing fees	\$ 1,621,226	\$ 1,544,795
Transaction fees	373,532	480,646
Trading membership fees	149,500	148,562
Other income	<u>66,850</u>	<u>59,771</u>
Total revenue	<u>2,211,108</u>	<u>2,233,774</u>
<b>Expenses</b>		
Personnel and professional fees	1,376,303	1,296,243
Communications	210,830	229,504
Marketing	177,244	149,301
Administration	168,825	174,756
Insurance	34,393	34,869
Depreciation of property, plant and equipment	13,322	30,009
Bank charges	<u>8,679</u>	<u>9,298</u>
Total expenses	<u>1,989,596</u>	<u>1,923,980</u>
Net income	221,512	309,794
Deficit, beginning of year	<u>(2,396,915)</u>	<u>(2,706,709)</u>
Deficit, end of year	<u><u>\$ (2,175,403)</u></u>	<u><u>\$ (2,396,915)</u></u>

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## THE BERMUDA STOCK EXCHANGE

### Statement of Cash Flows

Year ended December 31, 2019  
(Unaudited, expressed in Bermuda Dollars)

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	<u>2019</u>	<u>2018</u>
<b>Cash flows from operating activities</b>		
Net income	\$ 221,512	\$ 309,794
Adjustments for:		
Depreciation of property, plant and equipment	13,322	30,009
Change in non-cash working capital balances:		
(Increase) decrease in accounts receivable	(72,748)	47,280
(Increase) decrease in prepaid expenses	(8,733)	4,216
Increase in deferred income	13,430	109,326
Increase in accounts payable and accrued liabilities	<u>3,218</u>	<u>44,429</u>
Net cash provided by operating activities	<u>170,001</u>	<u>545,054</u>
<b>Cash flows from investing activities</b>		
Increase in term deposits	(767,591)	(9,868)
Purchase of property, plant and equipment	<u>(15,004)</u>	<u>(9,285)</u>
Net cash used in investing activities	<u>(782,595)</u>	<u>(19,153)</u>
Net (decrease) increase in cash and cash equivalents	(612,594)	525,901
Cash and cash equivalents, beginning of year	<u>1,264,947</u>	<u>740,046</u>
Cash and cash equivalents, end of year	<u>\$ 653,353</u>	<u>\$ 1,265,947</u>
<b>Supplemental information</b>		
Interest paid	<u>\$</u>	<u>\$ -</u>

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## EXHIBIT I

### Exhibit Request:

For the latest fiscal year of the applicant, audited financial statements which are prepared in accordance with, or in the case of a foreign applicant, reconciled with, United States generally accepted accounting principles, and are covered by a report prepared by an independent public accountant. If an applicant has no consolidated subsidiaries, it shall file audited financial statements under Exhibit I alone and need not file a separate unaudited financial statement for the applicant under Exhibit D.

### Response:

Audited unconsolidated financial statements for MIAX Emerald, LLC as of December 31, 2019 are attached. MIAX Emerald, LLC has no consolidated subsidiaries.

Financial Statements and Report of  
Independent Certified Public Accountants

**MIAX Emerald, LLC**

December 31, 2019 and 2018

# MIAX Emerald, LLC

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**GRANT THORNTON LLP**

757 Third Avenue, 9<sup>th</sup> Floor  
New York, NY 10017

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**REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS**

Board of Directors  
MIAX Emerald, LLC

We have audited the accompanying financial statements of MIAX Emerald, LLC, which comprise the balance sheets as of December 31, 2019 and 2018, and the related statements of operations and member's deficit, and cash flows for the year ended December 31, 2019 and the period from January 30, 2018 (inception) to December 31, 2018, and the related notes to the financial statements.

**Management's responsibility for the financial statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

**Auditor's responsibility**

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of MIAX Emerald, LLC as of December 31, 2019 and 2018, and the results of its operations and its cash flows for the year ended December 31, 2019 and the period from January 30, 2018 (inception) to December 31, 2018 in accordance with accounting principles generally accepted in the United States of America.

*Grant Thornton LLP*

New York, New York  
June 29, 2020

**MIAX Emerald, LLC**  
**Balance Sheets**  
**December 31, 2019 and 2018**

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	<u>2019</u>	<u>2018</u>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 3,812,944	\$ -
Accounts receivable	1,113,333	-
Prepaid and other current assets	<u>653,986</u>	<u>725,414</u>
Total current assets	5,580,263	725,414
Fixed assets, net of depreciation and amortization	3,905,044	5,460,508
Internally developed software, net of amortization	3,426,353	-
Other assets	<u>1,901,747</u>	<u>1,158,724</u>
Total assets	<u>\$ 14,813,407</u>	<u>\$ 7,344,646</u>
<b>LIABILITIES AND MEMBER'S EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 1,231,008	\$ 1,515,430
Accrued compensation payable	1,321,971	1,721,674
Current debt	<u>976,596</u>	<u>766,022</u>
Total current liabilities	3,529,575	4,003,126
Due to Miami International Holdings, Inc.	30,115,792	15,851,164
Long term debt	<u>525,290</u>	<u>1,073,705</u>
Total liabilities	34,170,657	20,927,995
Commitments and Contingencies (Note 5)		
<b>DEFICIT IN MEMBER'S EQUITY</b>		
Accumulated losses	<u>(19,357,250)</u>	<u>(13,583,349)</u>
Total member's deficit	<u>(19,357,250)</u>	<u>(13,583,349)</u>
Total liabilities and deficit in member's equity	<u>\$ 14,813,407</u>	<u>\$ 7,344,646</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX Emerald, LLC**  
**Statements of Operations and Member's Deficit**  
**December 31, 2019 and 2018**

	<b>Year Ended</b>	<b>Period from</b>
	<b>December 31, 2019</b>	<b>January 30, 2018</b>
		<b>(inception) to</b>
		<b>December 31, 2018</b>
REVENUES		
Transaction fees	\$ 15,128,386	\$ -
Access fees	3,052,864	-
Regulatory fees	3,069,412	-
Market data fees	57,955	-
Other revenue	10,824	-
	<u>21,319,441</u>	<u>-</u>
Total revenues		
COST OF REVENUES		
Transaction rebates	(11,055,990)	-
	<u>(11,055,990)</u>	<u>-</u>
NET REVENUES	<u>10,263,451</u>	<u>-</u>
OPERATING EXPENSES INCURRED DIRECTLY OR ALLOCATED FROM PARENT		
Employee compensation and benefits	6,690,657	10,193,837
Information technology and communication costs	2,378,747	1,154,450
Depreciation and amortization	2,294,927	616,785
Occupancy costs	527,637	732,720
Professional services	13,862	2,310
Regulatory services fees	423,164	-
Financial and banking consulting services	127,818	13,862
Trading operations costs	1,999,748	16,105
Share based compensation to third parties	2,363	521
Directors' fees	472,050	256,760
Other	932,795	483,281
	<u>15,863,768</u>	<u>13,470,631</u>
Total operating expenses		
OPERATING LOSS	<u>(5,600,317)</u>	<u>(13,470,631)</u>
Interest expense	(173,584)	(112,718)
	<u>(173,584)</u>	<u>(112,718)</u>
NET LOSS	<u>(5,773,901)</u>	<u>(13,583,349)</u>
Member's deficit at beginning of year	<u>(13,583,349)</u>	<u>-</u>
Member's deficit at end of year	<u>\$ (19,357,250)</u>	<u>\$ (13,583,349)</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX Emerald, LLC**  
**Statements of Cash Flows**  
**Decembers 31, 2019 and 2018**

	<b>Year Ended</b>	<b>Period from</b>
	<b>December 31, 2019</b>	<b>January 30, 2018</b>
	<b>(inception) to</b>	<b>December 31, 2018</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (5,773,901)	\$ (13,583,349)
Depreciation and amortization	2,294,927	616,785
Adjustments to reconcile net loss to net cash used in operating activities		
Changes in operating assets and liabilities		
Accounts receivable	(1,113,333)	-
Prepaid and other current assets	71,428	(725,414)
Other assets	(965,710)	(1,158,724)
Accounts payable and other liabilities	(284,423)	1,515,430
Accrued compensation payable	(399,704)	1,721,674
Net cash used in operating activities	<u>(6,170,716)</u>	<u>(11,613,598)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	<u>(3,550,660)</u>	<u>(3,972,363)</u>
Net cash used in investing activities	<u>(3,550,660)</u>	<u>(3,972,363)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Proceeds from debt	112,135	94,477
Repayments of term debt	(842,443)	(359,680)
Due to Miami International Holdings, Inc.	<u>14,264,628</u>	<u>15,851,164</u>
Net cash provided by financing activities	<u>13,534,320</u>	<u>15,585,961</u>
Increase (decrease) in cash and cash equivalents	3,812,944	-
Cash and cash equivalents at beginning of year	\$ -	\$ -
Cash and cash equivalents at end of year	<u>\$ 3,812,944</u>	<u>\$ -</u>
Cash paid during the year for interest	<u>\$ 173,584</u>	<u>\$ 112,718</u>
<b>Non-cash investing activities</b>		
Assets acquired under capital leases	\$ 392,468	\$ 2,104,930
Non-cash amount related to capitalized internally developed software	<u>172,087</u>	<u>198,807</u>
Total non-cash investing activities	<u>\$ 564,555</u>	<u>\$ 2,303,737</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2019**

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**1. ORGANIZATION AND OPERATIONS**

MIAX Emerald, LLC (“Emerald” or the “Company”) was formed in the State of Delaware on January 30, 2018 and is a wholly-owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), and an affiliate of Miami International Securities Exchange, LLC (“MIAX”), MIAX PEARL, LLC (“PEARL”), Miami International Technologies, LLC (“MIAX Technologies”), Miami International Futures Exchange, LLC (“MIAX Futures”) and MIAX Global, LLC. Emerald provides a marketplace and facilities for the trading of equity options products for its members and employs pro-rata market model combined with maker-taker pricing. MIAX, the Parent’s first options exchange, employs a pro-rata market model. PEARL, the Parent’s second equity options exchange, employs the price-time priority model. MIAX Futures intends to provide a marketplace and facilities for the trading of futures products for its members, but is currently inactive. MIAX Technologies will sell or license trading technology. MIAX Global focuses on merger, acquisition and joint venture activities of MIH.

On December 20, 2018, the Company received an Approval Order from The United States Securities and Exchange Commission (“SEC”) of its application for registration as a National Securities Exchange and began trading on March 1, 2019.

Due to the fact that the Company has incurred a cumulative loss of approximately \$19 million from January 30, 2018 (date of inception) to December 31, 2019, substantial doubt was raised in the past about the Company’s ability to continue as a going concern. These periodic shortfalls were covered through capital raises and short-term borrowing but the Company’s continuation as a going concern was dependent on its ability to obtain these forms of additional financing.

In an effort to address the conditions and events that gave rise to this situation, the Parent implemented a plan that included a refinancing with its current lender which has provided a substantial cash surplus for the next 12-24 month period. This new loan agreement for \$77 million (of which approximately \$43 million was utilized to repay the outstanding debt with the same lender), is described in more detail in Note 5. To further ensure that the three exchange subsidiaries adequately fund their operations and fulfill their obligations, the parent company, MIH has executed separate funding agreements with MIAX, PEARL and Emerald which provide for seed capital and guarantee ongoing financial support.

Based on the developments outlined above which have substantially enhanced the Company’s cash position as well as the projected results for the next twelve months, management has concluded that there is sufficient liquidity to mitigate the risk that the Company can continue as a going concern. This is based on the following:

- Strong cash position which will provide a cushion in the event that actual results fall short of projections.
- Continued revenue and market share growth.
- Expansion to a business model that includes diversified revenue streams.
- Availability of additional funding from the current lender as well as an equipment financing option to build the equities exchange.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2019**

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In the event that these steps are not effective and there is a liquidity shortfall, management has other contingency plans and options that are available that would include reducing costs, raising additional capital or expanding current refinancing. There can be no assurance as to the availability or terms upon which such financing and capital might be available.

**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Basis of Presentation**

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“US GAAP”).

**Use of Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

**Cash and Cash Equivalents**

All highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents.

The Company periodically maintains cash balances at financial institutions in excess of the \$250,000 Federal Deposit Insurance Corporation insurance limit. As of December 31, 2019, cash and cash equivalents were held at major financial institutions. Cash and cash equivalents approximate fair value. It is the Company’s policy to monitor the credit standing of the financial institutions with which it conducts business.

**Prepaid Expenses**

Prepaid expenses primarily consist of prepaid software maintenance fees.

**Fixed Assets**

Fixed assets are recorded at cost. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets ranging from three to five years. Fixed assets acquired under capital leases are depreciated over the life of the lease. Leasehold improvements are amortized over the estimated useful lives of the improvements or the remaining terms of the leases, whichever is less. Any gain or loss on the retirement of assets is recognized currently.

Depreciable assets are only evaluated for impairment upon a significant change in the operating or macroeconomic environment. In these circumstances, if an evaluation of the undiscounted cash flows indicates impairment, the asset is written down to its estimated fair value, which is based on discounted future cash flows. Useful lives are periodically evaluated to determine whether events or circumstances have occurred that indicate the need for revision.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2019**

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**Computer Software Developed or Obtained for Internal Use**

The Company follows the provisions of ASC 350, Intangibles - Goodwill and Other (“ASC 350”). The Company capitalizes costs of internally developed software incurred during the application development stage, which includes design, coding, installation and testing activities. The Company amortizes these costs over the period to which benefit is provided.

**Impairment of Long-Lived Assets and Finite-Lived Intangible Assets**

We review our fixed assets and finite-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. When these indicator exists, we estimate undiscounted net future cash flows over the remaining life of such assets. If the total of the estimated cash flows is less that the carrying amount, an impairment would exist, which is measured based upon the difference between the carrying amount and the fair value of the assets.

**Other Assets**

Other assets primarily consist of long-term membership and participation fees paid to industry associations.

**Due to Miami International Holdings, Inc.**

All of the Company’s expenditures to date have been funded by the Parent. The Due to MIH balance represents the combination of allocated costs for the current period as well as the liability for allocated net assets.

Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace and facility for the trading of equity options, are primarily attributable to the Company, MIAX and PEARL. The Company’s allocated portion of cost are included in the accompanying statement of operations and member’s deficits. While equipment leasing costs are allocated to MIAX, PEARL and Emerald, all other financing and capital raising costs are not allocated to the subsidiaries and are reflected solely in the Parent company financial statements. The Company considers changes to Due to MIH to be financing activity for purposes of the Statement of Cash Flows.

**Revenue Recognition**

The Company's revenue recognition policies comply with ASC 605, Revenue Recognition (“ASC 605”). Revenue will be recognized when all of the following criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller’s price to the buyer is fixed and determinable; and (4) collectability is reasonably assured. Revenue recognition policies for specific sources of revenue are discussed below:

*Transaction Fees:* Transaction fees are a function of three variables: (1) exchange fee rates; (2) overall industry trading volume; and (3) market share achieved by Emerald. Transaction fees are assessed on a per contract basis and are considered earned upon the execution of a trade and are recognized on a trade date basis. Transaction fees are recorded net of applicable volume discounts.

Rebates paid for certain customer transactions are recorded separately as a cost of revenue. In the event that member firms prepay for transaction fees, revenue is recognized as transaction fees are incurred.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2019**

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*Access Fees:* Access fees represent fees assessed to Emerald members for the opportunity to trade and use other related functions of Emerald, including trading permits and connectivity. Access fees are recognized during the period the service is provided.

*Market Data Fees:* Market data revenue includes distributions from Emerald's participation in OPRA and is distributed based upon each individual exchange's market share of total options contracts cleared by the OCC. Market data revenue is recognized in the period the data is provided.

*Regulatory Fees:* Regulatory fees include the Options Regulatory Fee ("ORF") and Section 31 fees. ORF is based on the number of customer contracts, as reported by OCC, executed or cleared by Emerald members on all US options exchanges and is recognized on a trade date basis. Section 31 fees of \$480,142 are also included in regulatory fees and are charged to Emerald members. Section 31 fees are used to offset similar fees charged to Emerald by the SEC which are included in trading operations

**Income Taxes**

Emerald is a single member limited liability company and was structured as a disregarded entity for U.S. federal, state and local income tax purposes. Accordingly, no provision for income taxes is made in Emerald's financial statements.

**Recent Accounting Pronouncements**

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue for Contracts with Customers (Topic 606). Upon the effective date, the ASU replaces almost all existing revenue recognition guidance, including industry specific guidance, in US GAAP. The standard provides a five-step analysis of transactions to determine when and how revenue is recognized, based upon the core principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the standard requires additional disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB subsequently issued ASU 2015-14, Revenue from Contracts with Customers - Deferral of the Effective Date that resulted in a one year deferral of ASU 2014-09 for fiscal years beginning after December 15, 2018. Early adoption is permitted for fiscal years beginning after December 15, 2016. The Company is currently evaluating the impact of the adoption of this standard on its financial statements but does not expect it to have a material impact, if any.

In February 2016, the FASB issued ASU 2016-02, which describes the principles for the recognition, measurement, presentation and disclosure of leases for both parties of the contract (both lessees and lessors). The new standard requires classifying leases as either finance or operating leases and will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease, respectively. Regardless of the classification, a lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months.

This guidance is effective for reporting periods beginning after December 15, 2019, however early adoption is permitted. Entities are required to use a modified retrospective approach for leases that exist or are

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
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entered into after the beginning of the earliest comparative period in the financial statements. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements.

In June 2020, the FASB issued ASU 2020-05 guidance, which provides an optional one-year deferral of the effective date of ASC 606, Revenue from Contracts with customers, and ASC 842, Leases, for Companies that have not yet issued their financial statements reflecting the adoption of ASC 606 and ASC 842. The Company has elected to utilize this one year deferral and will continue evaluating the impact of these standards on our financial statements.

**3. FIXED ASSETS**

The Company's allocation of fixed assets is comprised of the following:

	<u>2019</u>	<u>2018</u>
Furniture and equipment	\$ 4,598,808	\$ 3,435,163
Software	200,028	136,506
Leasehold improvements	<u>917,953</u>	<u>0</u>
	5,716,789	3,571,669
Less - accumulated depreciation and amortization	<u>2,060,447</u>	<u>616,785</u>
	<u>3,656,342</u>	<u>2,954,884</u>
Capitalized internally developed software in-progress	<u>248,702</u>	<u>2,505,624</u>
	<u>\$ 3,905,044</u>	<u>\$ 5,460,508</u>

Depreciation expense for the years ended December 31, 2019 and 2018 was \$1,666,349 and \$616,785, respectively. Substantially all of the assets are pledged as described in Note 6

**4. INTERNALLY DEVELOPED SOFTWARE**

The Company capitalized \$3,426,353 of development costs, net of amortization as of December 31, 2019. Amortization expense of \$628,578 was recorded in 2019.

**MIAX Emerald, LLC**  
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**December 31, 2019**

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Future amortization of internally developed software is as follows:

**Years Ending December 31,**

2020	\$ 810,986
2021	810,986
2022	820,264
2023	803,034
2024	<u>181,083</u>
	<u>\$ 3,426,353</u>

**5. COMMITMENTS AND CONTINGENCIES**

**Operating Leases**

The Parent leases space for its Princeton, New Jersey office under various operating lease agreements. The leases are for approximately 30,761 square feet (the “Princeton Premises”) and continue through May 31, 2020.

In April 2017, the Parent entered into an amendment for the lease for the Princeton Premises for an additional 18,550 square feet of office space for a term commencing on May 1, 2017 through March 31, 2026. The additional space will allow for the expansion of business activities.

In April 2017, the Parent additionally entered into a sublease for approximately 7,000 square feet used as a gym space in the same building as the Princeton Premises (“Fitness Center”). The lease term for the Fitness Center commenced on May 1, 2017 and continues through March 31, 2022.

**Claims and Litigation**

On September 1, 2017, Nasdaq, Inc., Nasdaq ISE, LLC and FTEN, INC, (collectively, “Nasdaq”) filed an action (Civil Action No. 3:17-CV-06664) against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC (collectively, “MIH”) in the U.S. District Court for the District of New Jersey (the “District Court Proceeding”). The Complaint alleges patent infringement and trade secret misappropriation relating to Nasdaq’s electronic trading technology and platforms.

In March and April 2018, MIH filed seven petitions for Covered Business Method Review (“CBMR”) before the Patent Trial and Appeal Board at the United States Patent and Trademark Office (“USPTO”) seeking a determination that the subject patent is invalid under the current law. Nasdaq withdrew its claims on one of the seven patents, leaving the remaining six to be reviewed by the USPTO. As of November 13, 2018 the PTAB instituted CBMR procedures to review all patents-in-suit. In November 2018, MIH filed a motion to stay the District Court Proceedings pending resolution of the CBMRs, which was granted by the District Court on December 3, 2018. All claims asserted by Nasdaq against MIH under the six patents at issue were invalidated by the PTAB in October and November 2019 (the “MIH-Nasdaq PTAB Decisions”). On October 31, 2019, in an unrelated case, the U.S. Court of Appeals for the Federal Circuit (“CAFC”)

**MIAX Emerald, LLC**  
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issued a decision in *Arthrex v. Smith & Nephew*, 2019 WL 5616010, which held that the statutory scheme of appointing PTAB Administrative Patent Judges (“APJs”) violates the Appointments Clause of the United States Constitution. From October 31, 2019 through December 13, 2019 Nasdaq requested a rehearing of each of the MIH-Nasdaq PTAB Decisions based on *Arthrex*. No decision on such rehearing requests have been issued to date by the PTAB. On November 18, 2019 Nasdaq requested a lift of the Stay in the District Court Proceeding based on the MIH-Nasdaq PTAB Decisions, which request was denied by the Court on November 20, 2019. On February 7, 2020, Nasdaq filed a motion to amend the Complaint to drop the patent claims asserted by Nasdaq in the District Court Proceeding, which motion was objected to by MIH. No decision has been rendered by the Court on this motion to date. On May 7, 2020, the PTAB issued a General Order that, among other matters, the six patent matters in the MIH-Nasdaq PTAB Decisions be held in abeyance pending resolution of any certiorari petitions to the U.S. Supreme Court in *Arthrex*.

In the normal course of its business, the Company is exposed to asserted and unasserted claims. In the opinion of management, these matters will not have a material adverse effect on the Company’s financial position, results of operations or cash flows.

**Employees and Directors**

The Parent has entered into employment agreements with certain employees. In addition to base salaries, the agreements provide for issuance of stock options, retention and, in part, incentive bonuses based on criteria established by the Board of Directors.

**6. DEBT AND CAPITAL LEASE OBLIGATIONS**

In June 2016, the Parent entered into a loan agreement with a lender to borrow \$30 million with a 5-year maturity at an interest rate that is 12.5% above LIBOR, which is set at a minimum of 1%. The initial rate of 13.5% was evaluated on a quarterly basis and adjusted for fluctuations in the LIBOR rate. In conjunction with the loan, the lender was granted a first priority lien against all of the assets of the Company. These assets include deposit accounts, documents, equipment, fixtures and improvements, general intangibles and intellectual property.

On December 31, 2018, the Parent borrowed an additional \$5 million from the lender and at the same time negotiated a postponement of the first scheduled semi-annual principal repayment of \$6 million, which was also due on that date.

In April 2019, the Parent refinanced the loan the same lender for a new principal amount of \$77 million in connection with the 2019 Loan Transaction. The new loan has a 5-year term maturing on April 26, 2024 with a fixed interest rate of 13.75%. Outstanding obligations under this loan, including capitalized interest payments (“PIK interest”), at December 31, 2019 was \$81,635,105. The Parent was in compliance with all covenant requirements through December 31, 2019.

The allocated debt obligations of the Company at December 31, 2019 and 2018 were \$112,135 and \$94,477, respectively which represented the remaining balance of a financing arrangement for annual insurance premiums.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2019**

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**Lease Agreements**

In June 2018, the Parent entered into a sublease with an existing vendor and leased equipment valued at \$2,117,897 for a 36-month term. In July 2018, the Parent entered into another sublease with the vendor and leased equipment valued at \$140,789 for a 36-month term. Both subleases carry an interest rate of 9.7% and were accounted for as capital leases. The Company was allocated \$2,104,930 of these equipment leases.

During 2019, the Parent entered into additional subleases with the same vendor and leased equipments valued at \$9,928,462 for a 36-month terms. These lease carries an interest rate of 11.12% and were accounted for as capital leases. The Company was allocated \$382,068 of these equipment lease.

Obligations under all capital leases at December 31, 2019 and 2018 were \$1,389,752 and \$1,745,250 respectively. The accumulated amortization for all capital leases at December 31, 2019 and 2018 were \$1,194,302 and \$405,647 respectively.

Future minimum lease payments under these obligations at December 31, 2019 are:

**Years Ending December 31,**

2020	\$	969,592
2021		497,613
2022		52,269
2023		<u>1,184</u>
Total future payments		1,520,658
Less interest		<u>130,906</u>
Net capital lease liability	\$	<u><u>1,389,752</u></u>

**7. EQUITY**

Emerald is a single member limited liability company and has issued 100 membership units constituting 100% membership interest in the Company to MIH who is the Company's sole member. Emerald has not made any distributions for the period from January 30, 2018 (inception) through December 31, 2019.

**8. EMPLOYEE BENEFIT PLAN**

The Parent sponsors a voluntary defined contribution 401(k) plan, which covers substantially all of the Company's employees. Neither the Parent nor the Company contributed to the 401(k) plan.

## **9. DIRECTORS FEES**

The Board of Directors of the Company approved the compensation amounts to be paid to Independent Directors and Committee Members of the Company for the period beginning July 1, 2018 until such time as the Board determines it is in the best interests of the Company to adopt new compensation terms (the “Director & Committee Fee Compensation”). Independent Directors and Committee Members of the Company are compensated as follows:

Independent Directors and Committee Members of Emerald who also serve in the same capacity for another MIH Self-Regulatory Organization (“SRO”) subsidiary each shall receive a rate of one-half of such compensation paid by the Company SRO subsidiary for the year, pro rata. Independent Directors serving in a sole capacity for Emerald, each receive \$50,000 for the year, pro rata. Committee Members each receive varying amounts, pro rata, depending on which committee(s) such Committee Member is appointed. The Director & Committee Fee Compensation is payable pursuant to the following two options: (i) a maximum of 50% cash payable quarterly and the balance in stock options to purchase Nonvoting Common Stock of the Company under the 2013 Stock Option and Incentive Plan for Non-Employee Directors, Committee Members and Members of the Board of Advisors (the “2013 Stock Option and Incentive Plan”), valued at the grant date, generally vesting quarterly and having a term of 10 years; or (ii) taking 100% of the Director & Committee Fee Compensation in Nonvoting Common Stock options under the 2013 Stock Option and Incentive Plan, valued at the grant date and generally vesting quarterly.

The number of options to be granted to Independent Directors is based the Director & Committee Fee Compensation divided by the value of each option under a theoretical valuation, and the exercise price applicable to each option is the fair market value (“FMV”) at the time of the grant.

Additionally, an Independent Director (not a Committee Member) serving in a sole capacity for the Company receives \$20,000 in value of Nonvoting Common Stock options and an Independent Director (not a Committee Member) who also serves in the same capacity for another Company SRO subsidiary shall receive \$10,000 in value of Nonvoting Common Stock option paid by the Company SRO subsidiary under the 2013 Stock Option and Incentive Plan annually, commencing in the calendar year following his/her first year of board service, vesting quarterly and having a term of 10 years. The same theoretical valuation discussed above would be used to determine how many options would be granted to the Independent Director annually.

Additionally, a new Independent Director only (not a Committee Member) serving in a sole capacity for the Company, upon first appointment to the Board of Directors or the board of a subsidiary of the Company, will receive a grant of 50,000 Nonvoting Common Stock options under 2013 Stock Option and Incentive Plan that will fully vest after 9 months of service as a director to the Company with the exercise price being FMV on the grant date and having a term of 10 years.

## **10. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company’s financial statements through June 29, 2020, the date the financial statements were available to be issued. The

**MIAX Emerald, LLC**  
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Company has determined that there are no material events that would require disclosure in the Company's financial statements other than those listed below and elsewhere in these financial statement footnotes.

**Equity Issuances**

Since January 1, 2020, the Parent received proceeds of \$6,603,334 in connection with (i) the exercise of 5,095,203 warrants and (ii) the exercise of 133,333 stock options.

**COVID-19 Pandemic**

Since January 1, 2020, the spread of COVID-19 has severely impacted many local economies around the globe. In many countries, businesses are being forced to cease or limit operations for long or indefinite periods of time. Measures taken to contain the spread of the virus, including travel bans, quarantines, social distancing, and closures of non-essential services have triggered significant disruptions to businesses worldwide, resulting in an economic slowdown. Global stock markets have also experienced great volatility and a significant weakening. Governments and central banks have responded with monetary and fiscal interventions to stabilise economic conditions. In response, the Company implemented, and has been operating effectively under its Business Continuity Plan ("BCP Plan") with nearly all staff working remotely. Despite the significant economic uncertainty, COVID-19 as not had an adverse impact on the Parent's debt covenant compliance, nor on the Company's ability to continue as a going concern. The duration and impact of the COVID-19 pandemic, as well as the effectiveness of government and central bank responses, remains unclear at this time. It is not possible to reliably estimate the duration and severity of these consequences, as well as their impact on the financial position and results of the Company for future periods.

## EXHIBIT K

### Exhibit Request:

This Exhibit is applicable only to exchanges that have one or more owners, shareholders, or partners that are not also members of the exchange. If the exchange is a corporation, please provide a list of each shareholder that directly owns 5% or more of a class of a voting security of the applicant. If the exchange is a partnership, please provide a list of all general partners and those limited and special partners that have the right to receive upon dissolution, or have contributed, 5% or more of the partnership's capital. For each of the persons listed in the Exhibit K, please provide the following:

1. Full legal name;
2. Title or Status;
3. Date title or status was acquired;
4. Approximate ownership interest; and
5. Whether the person has control, a term that is defined in the instructions to this Form.

### Response:

Miami International Holdings, Inc. owns 100% of MIAX Emerald, LLC. Miami International Holdings, Inc. exercises "control" over the Exchange, as that term is defined in the Form 1 instructions. MIAX Emerald, LLC became a wholly-owned subsidiary of Miami International Holdings, Inc. on January 30, 2018.

## EXHIBIT M

### Exhibit Request:

Provide an alphabetical list of all members, subscribers or other users, including the following information:

1. Name;
2. Date of election to membership or acceptance as a member, subscriber or other user;
3. Principal business address and telephone number;
4. If member, subscriber or other user is an individual, the name of the entity with which such individual is associated and the relationship of such individual to the entity (e.g. partner, officer, director, employee, etc.);
5. Describe the type of activities primarily engaged in by the member, subscriber, or other user (e.g. floor broker, specialist, odd lot dealer, other market maker, proprietary trader, non-broker dealer, inactive or other functions). A person shall be “primarily engaged” in an activity or function for purposes of this item when that activity or function is the one in which that person is engaged for the majority of their time. When more than one type of person at an entity engages in any of the six types of activities or functions enumerated in this item, identify each type (e.g. proprietary trader, Registered Competitive Trader and Registered Competitive Market Maker) and state the number of participants, subscribers, or other users in each; and
6. The class of membership, participation or subscription or other access.

### Response:

Attached is a list of the members of the Exchange as of June 23, 2020, including the information set forth in items 1-6 above.

**ABN AMRO CLEARING CHICAGO LLC**

175 West Jackson Blvd., Ste. 2050  
 Chicago IL 60604  
 Tele #: (312) 604-8000

Approval Date: 3/1/2019  
**Membership Activities:**  
 Clearance  
 International Tele #

SEC #: 8-34354  
 CRD #: 14020

**AMS DERIVATIVES B.V.**

Strawinskylaan 3095  
 Amsterdam, 1077ZX  
 Netherlands  
 Tele #:

Approval Date: 6/17/2019  
**Membership Activities:**  
 Registered Market Maker  
 International Tele # +31 20 708 7748

SEC #: 8-69890  
 CRD #: 286507

**APEX CLEARING CORPORATION**

One Dallas Center  
 350 N. St. Paul, Suite 1300  
 Dallas TX 75201  
 Tele #: (214) 765-1100

Approval Date: 3/1/2019  
**Membership Activities:**  
 Clearance  
 International Tele #

SEC #: 8-23522  
 CRD #: 13071

**BARCLAYS CAPITAL INC.**

745 Seventh Avenue  
 New York NY 10019  
 Tele #: (212) 526-7000

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-41342  
 CRD #: 19714

**BOFA SECURITIES, INC.**

One Bryant Park  
 222 Broadway  
 New York NY 10038  
 Tele #: (646) 743-2734

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-69787  
 CRD #: 283942

**CITADEL SECURITIES LLC**

131 South Dearborn Street - 32nd Floor  
 Chicago IL 60603  
 Tele #: (312) 395-2100

Approval Date: 3/1/2019  
**Membership Activities:**  
 Primary Lead, Lead, Registered Market Maker & Order Entry  
 International Tele #

SEC #: 8-53574  
 CRD #: 116797

**CITIGROUP GLOBAL MARKETS INC.**

390-388 Greenwich Street  
 New York NY 10013  
 Tele #: (212) 816-6000

Approval Date: 5/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-8177  
 CRD #: 7059

**CREDIT SUISSE SECURITIES (USA) LLC**

11 Madison Avenue - 24th Floor  
 New York NY 10010  
 Tele #: (212) 325-2000

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-00422  
 CRD #: 816

**CUTLER GROUP, LP**

101 Montgomery Street, Ste. 700  
 San Francisco CA 94104  
 Tele #: (415) 293-3956

Approval Date: 3/1/2019  
**Membership Activities:**  
 Registered Market Maker & Order Entry  
 International Tele #

SEC #: 8-42415  
 CRD #: 31730

**DASH FINANCIAL TECHNOLOGIES LLC**

311 S. Wacker Drive, Ste. 1000  
Chicago IL 60606  
Tele #: (847) 550-1730

Approval Date: 3/1/2019

SEC #: 8-52503

**Membership Activities:**

CRD #: 104031

Order Entry &amp; Clearance

International Tele #

**DEUTSCHE BANK SECURITIES INC.**

60 Wall Street  
New York NY 10005  
Tele #: (212) 250-2500

Approval Date: 3/1/2019

SEC #: 8-17822

**Membership Activities:**

CRD #: 2525

Order Entry &amp; Clearance

International Tele #

**GLOBAL EXECUTION BROKERS, LP**

401 City Avenue, Ste. 200  
Bala Cynwyd PA 19004  
Tele #: (610) 617-2600

Approval Date: 3/1/2019

SEC #: 8-65878

**Membership Activities:**

CRD #: 126407

Order Entry

International Tele #

**GOLDMAN SACHS & CO. LLC**

200 West Street  
New York NY 10282  
Tele #: (212) 902-1000

Approval Date: 3/1/2019

SEC #: 8-129

**Membership Activities:**

CRD #: 361

Order Entry &amp; Clearance

International Tele #

**GROUP ONE TRADING LP**

425 S. Financial Place - Ste. 3400  
Chicago IL 60605  
Tele #: (312) 347-8864

Approval Date: 3/1/2019

SEC #: 8-47762

**Membership Activities:**

CRD #: 37484

Order Entry

International Tele #

**HRT FINANCIAL LLC**

4 World Trade Center  
150 Greenwich Street - 57th Floor  
New York NY 10007  
Tele #: (212) 293-1444

Approval Date: 3/1/2019

SEC #: 8-68430

**Membership Activities:**

CRD #: 152144

Order Entry

International Tele #

**IMC-CHICAGO, LLC D/B/A IMC FINANCIAL MARKETS**

233 South Wacker Drive, Ste. 4300  
Chicago IL 60606  
Tele #: (312) 244-3300

Approval Date: 3/1/2019

SEC #: 8-52600

**Membership Activities:**

CRD #: 104143

Primary Lead, Lead &amp; Registered Market Maker

International Tele #

**INSTINET, LLC**

Worldwide Plaza  
309 West 49th Street  
New York NY 10019  
Tele #: (212) 310-9500

Approval Date: 3/1/2019

SEC #: 8-23669

**Membership Activities:**

CRD #: 7897

Order Entry &amp; Clearance

International Tele #

**INTERACTIVE BROKERS LLC**

One Pickwick Plaza - 2nd Floor  
Greenwich CT 06830  
Tele #: (203) 618-5710

Approval Date: 3/1/2019

SEC #: 8-47257

**Membership Activities:**

CRD #: 36418

Order Entry &amp; Clearance

International Tele #

**J.P. MORGAN SECURITIES LLC**

383 Madison Avenue  
 New York NY 10179  
 Tele #: (201) 595-8471

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-35008  
 CRD #: 79

**JANE STREET CAPITAL, LLC**

250 Vesey Street - 6th Floor  
 New York NY 10281  
 Tele #: (646) 759-6000

Approval Date: 3/8/2019  
**Membership Activities:**  
 Order Entry  
 International Tele #

SEC #: 8-52275  
 CRD #: 103782

**JANE STREET OPTIONS, LLC**

250 Vesey Street - 6th Floor  
 New York NY 10281  
 Tele #: (646) 759-6000

Approval Date: 3/8/2019  
**Membership Activities:**  
 Order Entry  
 International Tele #

SEC #: 8-66813  
 CRD #: 134159

**JEFFERIES LLC**

520 Madison Avenue - 11th Floor  
 New York NY 10022  
 Tele #: (212) 284-2300

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-15074  
 CRD #: 2347

**JUMP TRADING, LLC**

600 West Chicago Avenue, Ste. 825  
 Chicago IL 60654  
 Tele #: (312) 205-8900

Approval Date: 12/9/2019  
**Membership Activities:**  
 Registered Market Maker  
 International Tele #

SEC #: 8-52989  
 CRD #: 106124

**MATRIX EXECUTIONS, LLC**

135 S. LaSalle Street, Ste. 300  
 Chicago IL 60603  
 Tele #: (312) 334-8000

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry  
 International Tele #

SEC #: 8-48255  
 CRD #: 38455

**MERRILL LYNCH PROFESSIONAL CLEARING CORP.**

One Bryant Park - 6th Floor  
 NY1-100-06-01  
 New York NY 10036  
 Tele #: (646) 743-1295

Approval Date: 3/1/2019  
**Membership Activities:**  
 Clearance  
 International Tele #

SEC #: 8-33359  
 CRD #: 16139

**MORGAN STANLEY & CO. LLC**

1585 Broadway  
 New York NY 10036  
 Tele #: (212) 761-4000

Approval Date: 3/1/2019  
**Membership Activities:**  
 All Market Maker & Electronic Exchange Options Memberships  
 International Tele #

SEC #: 8-15869  
 CRD #: 8209

**OPTIVER US LLC**

130 E. Randolph Street, Ste. 1300  
 Chicago IL 60601  
 Tele #: (312) 821-9500

Approval Date: 3/1/2019  
**Membership Activities:**  
 Primary Lead, Lead & Registered Market Maker  
 International Tele #

SEC #: 8-66083  
 CRD #: 128030

**PERSHING LLC**

One Pershing Plaza - 10th Fl.  
 Jersey City NJ 07399  
 Tele #: (201) 413-2000

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-17574  
 CRD #: 7560

**SIMPLEX TRADING, LLC**

230 So. LaSalle St., Ste. 4-100  
 Chicago IL 60604  
 Tele #: (312) 360-2440

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry  
 International Tele #

SEC #: 8-68556  
 CRD #: 153585

**SUSQUEHANNA INVESTMENT GROUP**

401 City Avenue, Ste. 201  
 Bala Cynwyd PA 19004  
 Tele #: (610) 617-2600

Approval Date: 3/1/2019  
**Membership Activities:**  
 Lead & Registered Market Maker  
 International Tele #

SEC #: 8-37520  
 CRD #: 33875

**SUSQUEHANNA SECURITIES, LLC**

401 City Avenue, Ste. 220  
 Bala Cynwyd PA 19004  
 Tele #: (610) 617-2600

Approval Date: 3/1/2019  
**Membership Activities:**  
 Primary Lead, Lead & Registered Market Maker  
 International Tele #

SEC #: 8-47034  
 CRD #: 35874

**TWO SIGMA SECURITIES, LLC**

100 Avenue of the Americas - 2nd Fl.  
 New York NY 10013  
 Tele #: (212) 625-5700

Approval Date: 3/1/2019  
**Membership Activities:**  
 Primary Lead, Lead, Registered Market Maker & Order Entry  
 International Tele #

SEC #: 8-68090  
 CRD #: 148960

**UBS SECURITIES LLC**

1285 Avenue of the Americas  
 New York NY 10019  
 Tele #: (203) 719-3000

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-22651  
 CRD #: 7654

**VOLANT EXECUTION, LLC**

233 S. Wacker Drive, Ste. 4040  
 Chicago IL 60606  
 Tele #: (312) 692-5000

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-66826  
 CRD #: 134284

**WELLS FARGO SECURITIES, LLC**

550 South Tryon Street - 6th Floor  
 D1086-060  
 Charlotte NC 28202  
 Tele #: (704) 715-6133

Approval Date: 3/6/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-65876  
 CRD #: 126292

**WOLVERINE EXECUTION SERVICES, LLC**

175 W. Jackson Blvd., Ste. 200  
 Chicago IL 60604  
 Tele #: (312) 884-4000

Approval Date: 3/1/2019  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-65336  
 CRD #: 120719

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**WOLVERINE TRADING, LLC**

175 W. Jackson Blvd., Ste. 200

Chicago

IL

60604

Tele #: (312) 884-3490

Approval Date: 3/1/2019

SEC #: 8-47484

**Membership Activities:**

CRD #: 36848

Primary Lead, Lead & Registered Market Maker

International Tele #

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**Total Firms 37**

## EXHIBIT N

### Exhibit Request:

Provide a schedule for each of the following:

1. The securities listed in the exchange, indicating for each the name of the issuer and a description of the security;
2. The securities admitted to unlisted trading privileges, indicating for each the name of the issuer and a description of the security;
3. The unregistered securities admitted to trading on the exchange which are exempt from registration under Section 12(a) of the Act. For each security listed, provide the name of the issuer and a description of the security, and the statutory exemption claimed (e.g. Rule 12a-6); and
4. Other securities traded on the Exchange, including for each the name of the issuer and a description of the security.

### Response:

1. Attached is a list of the securities listed on the exchange as of June 23, 2020, indicating for each the name of the issuer and a description of the security.
2. None.
3. None.
4. None.

Securities List

MIAX Emerald Exchange (Listed as of 6/23/2020)		
Und Symbol	Company Name	Inst Type
A	AGILENT TECHNOLOGIES INC.	Equity
AA	ALCOA Corporation	Equity
AAL	AMERICAN AIRLINES GROUP INC.	Equity
AAN	Aaron's Inc	Equity
AAOI	APPLIED OPTOELECTRONICS, INC.	Equity
AAP	ADVANCE AUTO PARTS INC.	Equity
AAPL	APPLE INC.	Equity
AAWW	Atlas Air Worldwide Holdings, Inc.	Equity
AAXJ	iShares MSCI All Country Asia ex Japan ETF	ETF
AAXN	Axon Enterprise, Inc.	Equity
AB	AllianceBernstein Holding L.P.	Equity
ABB	ABB LTD-SPON ADR	Equity
ABBV	ABBVIE INC.	Equity
ABC	AMERISOURCEBERGEN, CORP.	Equity
ABEO	Abeona Therapeutics Inc.	Equity
ABEV	AMBEV S.A.	Equity
ABG	ASBURY AUTOMOTIVE GROUP INCCOM	Equity
ABMD	ABIOMED INC	Equity
ABR	Arbor Realty Trust, Inc.	Equity
ABT	ABBOTT LABORATORIES	Equity
ABUS	Arbutus Biopharma Corporation	Equity
ACAD	ACADIA PHARMACEUTICALS INC.	Equity
ACB	Aurora Cannabis Inc.	Equity
ACCO	ACCO Brands Corp	Equity
ACGL	ARCH CAPITAL GROUP Ltd	Equity
ACH	Aluminum Corporation of China Limited	Equity
ACHC	Acadia Healthcare Co Inc	Equity
ACIW	ACI Worldwide, Inc.	Equity
ACLS	Axcelis Technologies Inc.	Equity
ACM	Aecom Technology Corporation	Equity
ACN	ACCENTURE PLC	Equity
ACOR	Acorda Therapeutics, Inc.	Equity
ACRX	AcelRx Pharmaceuticals Inc	Equity
ACTG	ACACIA RESEARCH CORPORATION	Equity
ACWI	iShares MSCI ACWI Index Fund	ETF
ADAP	Adaptimmune Therapeutics PLC	Equity
ADBE	ADOBE SYSTEMS INC.	Equity
ADI	ANALOG DEVICES INC	Equity
ADM	ARCHER DANIELS MIDLAND COMPANY	Equity
ADMA	ADMA Biologics Inc	Equity
ADMP	Adamis Pharmaceuticals Corporation	Equity
ADMS	Adamas Pharmaceuticals, Inc.	Equity
ADNT	Adient plc	Equity
ADP	AUTOMATIC DATA PROCESSING INC	Equity
ADPT	Adaptive Biotechnologies Corp	Equity

Securities List

Und Symbol	Company Name	Inst Type
ADRO	Aduro BioTech, Inc.	Equity
ADS	ALLIANCE DATA SYSTEMS CORP.	Equity
ADSK	AUTODESK, INC.	Equity
ADT	ADT Inc.	Equity
ADTN	ADTRAN, INC.	Equity
ADVM	Adverum Biotechnologies, Inc.	Equity
AEE	AMEREN CORPORATION	Equity
AEG	AEGON N.V.	Equity
AEIS	Advanced Energy Industries, Inc.	Equity
AEL	AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY	Equity
AEM	AGNICO-EAGLE MINES LTD.	Equity
AEO	AMERICAN EAGLE OUTFITTERS, INC.	Equity
AEP	AMERICAN ELECTRIC POWER COMPANY, INC.	Equity
AER	AerCap Holdings NV	Equity
AERI	Aerie Pharmaceuticals, Inc.	Equity
AES	AES CORP.	Equity
AFH	Atlas Financial Holdings, Inc.	Equity
AFL	AFLAC INC.	Equity
AFMD	Affimed N.V.	Equity
AFTY	CSOP FTSE China A50 ETF	ETF
AG	First Majestic Silver Corp	Equity
AGCO	AGCO CORPORATION	Equity
AGEN	Agenus Inc.	Equity
AGG	iShares Core U.S. Aggregate Bond ETF	ETF
AGI	ALAMOS GOLD INC	Equity
AGIO	Agios Pharmaceuticals Inc	Equity
AGNC	AGNC Investment Corp.	Equity
AGO	ASSURED GUARANTY LTD.	Equity
AGQ	PROSHARES ULTRA SILVER	ETF
AGRO	AdecoAgro S.A.	Equity
AGRX	Agile Therapeutics, Inc.	Equity
AGTC	Applied Genetic Technologies Corp	Equity
AHT	Ashford Hospitality Trust, Inc.	Equity
AI	Arlington Asset Investment Corp.	Equity
AIG	AMERICAN INTERNATIONAL GROUP, INC.	Equity
AIMT	Aimmune Therapeutics, Inc.	Equity
AINV	Apollo Investment Corporation	Equity
AIR	AAR Corp.	Equity
AIV	Apartment Investment and Management Company	Equity
AIZ	Assurant Inc.	Equity
AJG	ARTHUR J. GALLAGHER & CO.	Equity
AJRD	Aerojet Rocketdyne Holdings, Inc.	Equity
AKAM	AKAMAI TECHNOLOGIES, INC.	Equity
AKBA	Akebia Therapeutics, Inc.	Equity
AL	Air Lease Corp	Equity
ALB	Albemarle Corporation	Equity

Securities List

Und Symbol	Company Name	Inst Type
ALGN	ALIGN TECHNOLOGY INC.	Equity
ALGT	Allegiant Travel Company	Equity
ALK	ALASKA AIR GROUP INC	Equity
ALKS	ALKERMES PLC	Equity
ALL	THE ALLSTATE CORPORATION	Equity
ALLE	ALLEGION PLC	Equity
ALLK	Allakos Inc	Equity
ALLT	Allot Communications Ltd	Equity
ALLY	ALLY FINANCIAL INC.	Equity
ALNY	ALNYLAM PHARMACEUTICALS INC	Equity
ALRM	Alarm.Com Holdings, Inc.	Equity
ALSK	Alaska Communications Systems Group, Inc.	Equity
ALSN	Allison Transmission Holdings, Inc.	Equity
ALV	Autoliv, Inc	Equity
ALXN	ALEXION PHARMACEUTICALS, INC.	Equity
AM	Antero Midstream Partners LP	Equity
AMAG	AMAG Pharmaceuticals Inc	Equity
AMAT	APPLIED MATERIALS, INC.	Equity
AMBA	AMBARELLA, INC.	Equity
AMBC	AMBAC FINANCIAL GROUP, INC.	Equity
AMC	AMC ENTERTAINMENT HOLDINGS, INC.	Equity
AMCX	AMC Networks Inc.	Equity
AMD	ADVANCED MICRO DEVICES, INC.	Equity
AME	AMETEK, INC.	Equity
AMED	AMEDISYS INC	Equity
AMG	AFFILIATED MANAGERS GROUP INC	Equity
AMGN	AMGEN INC.	Equity
AMH	American Homes 4 Rent	Equity
AMJ	JP Morgan Alerian MLP Index ETN	ETF
AMKR	AMKOR TECHNOLOGY, INC.	Equity
AMLP	Alerian MLP ETF	ETF
AMN	AMN Healthcare Services, Inc.	Equity
AMP	AMERIPRISE FINANCIAL INC	Equity
AMPE	Ampio Pharmaceuticals Inc.	Equity
AMPH	Amphastar Pharmaceuticals, Inc.	Equity
AMRN	AMARIN CORPORATION PLC	Equity
AMRS	Amyris, Inc.	Equity
AMRX	Amneal Pharmaceuticals, Inc.	Equity
AMSC	AMERICAN SUPERCONDUCTOR CORP	Equity
AMT	AMERICAN TOWER CL A	Equity
AMTD	AMERITRADE HOLDING CORP	Equity
AMWD	American Woodmark Corp.	Equity
AMZA	InfraCap MLP ETF	ETF
AMZN	AMAZON.COM INC.	Equity
AN	AUTONATION, INC	Equity
ANAB	AnaptysBio, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
ANDE	The Andersons, Inc.	Equity
ANET	Arista Networks Inc	Equity
ANF	ABERCROMBIE & FITCH COMPANY	Equity
ANGI	Angie's List, Inc.	Equity
ANGO	AngioDynamcis, Inc.	Equity
ANIK	ANIKA THERAPEUTICS INC.	Equity
ANIP	ANI Pharmaceuticals, Inc.	Equity
ANSS	ANSYS, Inc.	Equity
ANTE	AirNet Technology Inc.	Equity
ANTM	ANTHEM, INC.	Equity
AON	Aon plc	Equity
AOS	A.O. Smith Corporation	Equity
APA	APACHE CORPORATION	Equity
APD	AIR PRODUCTS AND CHEMICALS,INC	Equity
APEI	American Public Education, Inc.	Equity
APH	Amphenol Corporation	Equity
APHA	Aphria Inc	Equity
APLE	Apple Hospitality REIT, Inc.	Equity
APLS	Apellis Pharmaceuticals Inc	Equity
APO	Apollo Global Management LLC	Equity
APOG	Apogee Enterprises, Inc.	Equity
APPN	Appian Corporation	Equity
APPS	Digital Turbine, Inc.	Equity
APRN	Blue Apron Holdings, Inc.	Equity
APT	ALPHA PRO TECH LTD.	Equity
APTO	Aptose Biosciences Inc	Equity
APTV	Aptiv PLC	Equity
AQMS	Aqua Metals, Inc.	Equity
AR	ANTERO RESOURCES CORPORATION	Equity
ARAY	Accuray Incorporated	Equity
ARCB	ARCBEST CORPORATION	Equity
ARCC	Ares Capital Corporation	Equity
ARCH	Arch Coal, Inc.	Equity
ARCO	ARCOS DORADOS HOLDINGS INC. CLA	Equity
ARE	Alexandria Real Estate Equities, Inc.	Equity
ARES	Ares Management, L.P.	Equity
ARGX	argenx SE	Equity
ARI	Apollo Commercial Real Estate Finance, Inc.	Equity
ARLO	Arlo Technologies, Inc.	Equity
ARLP	ALLIANCE RESOURCE PARTNERS	Equity
ARMK	Aramark	Equity
ARNA	ARENA PHARMACEUTICALS, INC.	Equity
AROC	Archrock, Inc.	Equity
ARR	ARMOUR Residential REIT, Inc.	Equity
ARW	ARROW ELECTRONICS INC.	Equity
ARWR	ARROWHEAD RESEARCH CORP.	Equity

Securities List

Und Symbol	Company Name	Inst Type
ASA	ASA Gold and Precious Metals Limited	Equity
ASC	Ardmore Shipping Corporation	Equity
ASGN	ASGN Inc.	Equity
ASH	ASHLAND INC	Equity
ASHR	Deutsche X-Trackers Harvest CSI 300 China A Shares ETF	ETF
ASHS	Deutsche X-trackers Harvest CSI 500 China A-Shares Small Cap ETF	ETF
ASIX	AdvanSix Inc.	Equity
ASMB	Assembly Biosciences, Inc.	Equity
ASML	ASML HOLDING NV	Equity
ASNA	Ascena Retail Group, Inc.	Equity
ASND	Ascendis Pharma A/S	Equity
ASPS	Altisource Portfolio Solutions SA	Equity
ASRT	Assertio Therapeutics, Inc.	Equity
ASUR	Asure Software, Inc.	Equity
AT	Atlantic Power Corporation	Equity
ATCO	Atlas Corporation	Equity
ATEN	A10 Networks, Inc.	Equity
ATEX	Anterix Inc	Equity
ATGE	Adtalem Global Education Inc.	Equity
ATH	Athene Holding Ltd.	Equity
ATHM	Autohome Inc (ADR)	Equity
ATHX	ATHERSYS, INC.	Equity
ATI	Allegheny Technologies, Inc.	Equity
ATNM	Actinium Pharmaceuticals, Inc.	Equity
ATNX	Athenex, Inc.	Equity
ATR	AptarGroup, Inc.	Equity
ATRA	Atara Biotherapeutics, Inc.	Equity
ATRC	AtriCure Inc	Equity
ATRS	Antares Pharma Inc.	Equity
ATSG	Air Transport Services Group Inc.	Equity
ATUS	Altice USA, Inc.	Equity
ATVI	ACTIVISION BLIZZARD, INC.	Equity
AU	ANGLOGOLD ASHANTI LTD.	Equity
AUDC	AUDIOCODES LTD.	Equity
AUPH	Aurinia Pharmaceuticals Inc.	Equity
AUTO	AutoWeb, Inc.	Equity
AUY	YAMANA GOLD, INC.	Equity
AVAV	Aerovironment Inc	Equity
AVB	AVALONBAY COMMUNITIES INC	Equity
AVD	American Vanguard Corp.	Equity
AVEO	AVEO Pharmaceuticals, Inc.	Equity
AVGO	Broadcom Inc.	Equity
AVID	AVID TECHNOLOGY,INC	Equity
AVLR	Avalara, Inc.	Equity
AVNS	Avanos Medical, Inc.	Equity
AVT	AVNET INC	Equity

Securities List

Und Symbol	Company Name	Inst Type
AVTR	Avantor, Inc.	Equity
AVXL	Anavex Life Sciences Corp.	Equity
AVY	AVERY DENNISON CORP.	Equity
AVYA	Avaya Holdings Corp.	Equity
AWI	Armstrong World Industries, Inc.	Equity
AWK	American Water Works Co., Inc.	Equity
AX	Axos Financial, Inc.	Equity
AXAS	ABRAXAS PETROLEUM CORPORATION	Equity
AXDX	ACCELERATE DIAGNOSTICS, INC.	Equity
AXGN	AxoGen, Inc.	Equity
AXGT	Axovant Sciences Ltd. (	Equity
AXL	AMERICAN AXLE & MFG. HLDNGS	Equity
AXNX	Axonics Modulation Technologies Inc	Equity
AXP	AMERICAN EXPRESS COMPANY	Equity
AXS	AXIS CAPITAL HOLDINGS LIMITED	Equity
AXSM	Axsome Therapeutics, Inc.	Equity
AXTA	Axalta Coating Systems Ltd.	Equity
AXTI	AXT, Inc.	Equity
AY	Atlantica Yield plc	Equity
AYI	Acuity Brands, Inc.	Equity
AYX	Alteryx, Inc.	Equity
AZN	ASTRAZENECA	Equity
AZO	AUTOZONE, INC.	Equity
AZPN	Aspen Technology, Inc.	Equity
AZZ	AZZ Incorporated	Equity
BA	THE BOEING COMPANY	Equity
BABA	ALIBABA GROUP HOLDING LTD	Equity
BAC	BANK OF AMERICA CORPORATION	Equity
BAH	Booz Allen Hamilton Holding Corporation	Equity
BAM	Brookfield Asset Management Inc	Equity
BANC	Banc of California, Inc.	Equity
BAP	Credicorp Ltd.	Equity
BAX	BAXTER INTERNATIONAL INC.	Equity
BB	Blackberry Limited	Equity
BBAR	BBVA Banco Frances S.A	Equity
BBBY	BED BATH & BEYOND INC.	Equity
BBD	BANCO BRADESCO S.A.	Equity
BBDC	Barings BDC, Inc.	Equity
BBH	Market Vectors Biotech ETF	ETF
BBL	BHP Billiton Plc	Equity
BBSI	Barrett Business Services Inc.	Equity
BBW	Build-A-Bear Workshop, Inc	Equity
BBY	BEST BUY COMPANY, INC.	Equity
BC	BRUNSWICK CORP	Equity
BCC	Boise Cascade Company	Equity
BCE	BCE INC	Equity

Securities List

Und Symbol	Company Name	Inst Type
BCEI	Bonanza Creek Energy, Inc.	Equity
BCLI	Brainstorm Cell Therapeutics Inc.	Equity
BCO	THE BRINK'S COMPANY	Equity
BCOR	Blucora, Inc.	Equity
BCOV	Brightcove Inc	Equity
BCPC	Balchem Corporation	Equity
BCRX	BIOCRYST PHARMACEUTICAS INC	Equity
BCS	BARCLAYS PLC	Equity
BDC	Belden Inc.	Equity
BDSI	BioDelivery Sciences International, Inc.	Equity
BDX	BECTON, DICKINSON AND CO	Equity
BE	Bloom Energy Corporation	Equity
BEAT	BIOTELEMETRY, INC.	Equity
BECN	BEACON ROOFING SUPPLY, INC	Equity
BEN	FRANKLIN RESOURCES INC.	Equity
BERY	Berry Plastics Group Inc.	Equity
BEST	BEST Inc.	Equity
BFB	Brown Forman Corporation Cl. B (150 shrs)	Equity
BFYT	Benefytt Technologies, Inc	Equity
BG	BUNGE LIMITED	Equity
BGCP	BGC Partners Inc	Equity
BGFV	Big 5 Sporting Goods Corp.	Equity
BGG	Briggs & Stratton Corporation	Equity
BGNE	BeiGene, Ltd.	Equity
BGS	B&G Foods Inc.	Equity
BHC	Bausch Health Companies Inc.	Equity
BHF	Brighthouse Financial, Inc.	Equity
BHP	BHP BILLITON LIMITED	Equity
BHR	Braemar Hotels & Resorts Inc.	Equity
BHVN	Biohaven Pharmaceutical Holding Company Ltd.	Equity
BIB	PROSHARES ULTRA NASDAQ BIOTECHNOLOGY	ETF
BIDU	BAIDU, INC.	Equity
BIG	BIG LOTS INC.	Equity
BIIB	BIOGEN IDEC INC.	Equity
BIL	SPDR Bloomberg Barclays 1-3 Month T-Bill ETF	ETF
BILI	Bilibili Inc.	Equity
BIO	Bio-Rad Laboratories, Inc.	Equity
BIP	Brookfield Infrastructure Partners L.P.	Equity
BIS	PROSHARES ULTRASHORT NASDAQ BIOTECH	ETF
BITA	Bitauto Holdings Limited	Equity
BJ	BJ's Warehouse Holdings, Inc.	Equity
BJRI	BJ S RESTAURANTS INC	Equity
BK	THE BANK OF NEW YORK MELLON CORPORATION	Equity
BKD	Brookdale Senior Living Inc	Equity
BKE	The Buckle, Inc.	Equity
BKEP	Blueknight Energy Partners, L.P.	Equity

Securities List

Und Symbol	Company Name	Inst Type
BKF	iShares MSCI BRIC ETF	Equity
BKH	BLACK HILLS CORPORATION	Equity
BKLN	PowerShares Senior Loan (ETF)	ETF
BKNG	Booking Holdings Inc.	Equity
BKR	Baker Hughes Company	Equity
BLD	TopBuild Corp.	Equity
BLDP	BALLARD POWER SYSTEMS INC	Equity
BLDR	Builders FirstSource Inc.	Equity
BLK	BLACKROCK INC	Equity
BLKB	Blackbaud Inc.	Equity
BLL	Ball Corporation	Equity
BLMN	Bloomin Brands Inc.	Equity
BLUE	bluebird bio Inc	Equity
BMA	Banco Macro S.A.	Equity
BMCH	BMC Stock Holdings, Inc.	Equity
BMO	Bank of Montreal	Equity
BMRN	BIOMARIN PHARMACEUTICAL INC.	Equity
BMY	BRISTOL-MYERS SQUIBB COMPANY	Equity
BNED	Barnes & Noble Education, Inc.	Equity
BNFT	BENEFITFOCUS, INC.	Equity
BNO	United States Brent Oil ETF	ETF
BNS	Bank of Nova Scotia	Equity
BOIL	PROSHARES ULTRA DJ-UBS NATURAL GAS	ETF
BOKF	Bok Financial Corporation	Equity
BOOM	DMC Global Inc.	Equity
BOOT	Boot Barn Holdings, Inc.	Equity
BOTZ	Global X Robotics & Artfcl Intlgn ETF	ETF
BOX	Box, Inc.	Equity
BP	BP PLC	Equity
BPFH	Boston Private Financial Holdings Inc.	Equity
BPMC	Blueprint Medicines Corporation	Equity
BPOP	Popular Inc. (10 shrs)	Equity
BPT	BP PRUDHOE BAY ROYALTY TRUST	Equity
BPY	Brookfield Property Partners L.P.	Equity
BR	Broadridge Financial Solutions, Inc.	Equity
BRFS	BRF - Brasil Foods SA	Equity
BRKB	BERKSHIRE HATHAWAY INC.	Equity
BRKR	Bruker Corporation	Equity
BRKS	Brooks Automation, Inc.	Equity
BRO	BROWN & BROWN, INC	Equity
BRX	Brixmor Property Group Inc	Equity
BRZU	Direxion Daily Brazil Bull 3X ETF	ETF
BSBR	Banco Santander Brasil SA	Equity
BSGM	BioSig Technologies, Inc.	Equity
BSQR	BSQUARE Corp.	Equity
BSX	BOSTON SCIENTIFIC CORPORATION	Equity

Securities List

Und Symbol	Company Name	Inst Type
BTE	Baytex Energy Corp.	Equity
BTG	B2Gold Corp.	Equity
BTI	British American Tobacco PLC	Equity
BTU	Peabody Energy Corporation	Equity
BUD	Anheuser-Busch InBev	Equity
BURL	Burlington Stores Inc	Equity
BVN	COMPANIA DE MINAS BUENAVENTURA S.A.-ADR	Equity
BW	Babcock & Wilcox Enterprises, Inc.	Equity
BWA	BORGWARNER INC.	Equity
BWXT	BWX Technologies, Inc.	Equity
BX	THE BLACKSTONE GROUP LP	Equity
BXMT	Blackstone Mortgage Trust, Inc.	Equity
BXP	BOSTON PROPERTIES INC	Equity
BYD	BOYD GAMING CORP.	Equity
BYND	Beyond Meat, Inc.	Equity
BZH	BEAZER HOMES USA INC.	Equity
BZQ	ProShares UltraShort MSCI Brazil Capped	ETF
BZUN	Baozun Inc.	Equity
C	CITIGROUP, INC.	Equity
CACC	Credit Acceptance Corp.	Equity
CACI	CACI INTERNATIONAL, INC.	Equity
CADE	Cadence Bancorporation	Equity
CAG	ConAgra Brands, Inc.	Equity
CAH	CARDINAL HEALTH INC	Equity
CAI	CAI International, Inc.	Equity
CAKE	THE CHEESECAKE FACTORY	Equity
CAL	Caleres, Inc.	Equity
CALA	Calithera Biosciences, Inc.	Equity
CALM	Cal-Maine Foods, Inc.	Equity
CALX	Calix, Inc.	Equity
CAMP	CalAmp Corp	Equity
CAMT	Camtek Ltd.	Equity
CAPL	CROSSAMERICA PARTNERS LP	Equity
CAR	Avis Budget Group Inc	Equity
CARA	Cara Therapeutics Inc.	Equity
CARG	CarGurus, Inc.	Equity
CARS	Cars.com Inc.	Equity
CASA	Casa Systems, Inc.	Equity
CASY	Casey's General Stores, Inc.	Equity
CAT	CATERPILLAR INC.	Equity
CATM	Cardtronics, Inc.	Equity
CB	Chubb Limited	Equity
CBAY	CymaBay Therapeutics, Inc.	Equity
CBB	Cincinnati Bell Inc.	Equity
CBIO	Catalyst Biosciences, Inc.	Equity
CBL	CBL & Associates Properties, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
CBOE	CBOE HOLDINGS, INC.	Equity
CBPO	China Biologic Products, Inc.	Equity
CBRE	CBRE Group, Inc.	Equity
CBRL	Cracker Barrel Old Country Store	Equity
CBT	CABOT CORPORATION	Equity
CC	The Chemours Company	Equity
CCC	Clarivate Analytics PLC	Equity
CCEP	Coca-Cola European Partners plc	Equity
CCI	CROWN CASTLE INTER.	Equity
CCJ	CAMECO CORPORATION	Equity
CCK	CROWN HOLDINGS INC.	Equity
CCL	CARNIVAL CORPORATION	Equity
CCLP	CSI Compressco LP	Equity
CCMP	Cabot Microelectronics Corporation	Equity
CCOI	Cogent Communications Holdings, Inc.	Equity
CCRN	Cross Country Healthcare, Inc.	Equity
CCS	Century Communities, Inc.	Equity
CCXI	CHEMOCENTRYX, INC.	Equity
CDAY	Ceridian HCM Holding Inc	Equity
CDE	COEUR d' ALENE MINES CORP	Equity
CDEV	Centennial Resource Development, Inc.	Equity
CDK	CDK GLOBAL, INC.	Equity
CDLX	Cardlytics Inc	Equity
CDMO	Avid Bioservices, Inc.	Equity
CDNS	CADENCE DESIGN SYSTEMS, I	Equity
CDW	CDW CORPORATION	Equity
CDZI	Cadiz Inc.	Equity
CE	CELANESE CORPORATION	Equity
CECE	CECO Environmental Corp.	Equity
CEIX	CONSOL Energy Inc	Equity
CENX	CENTURY ALUMINUM COMPANY	Equity
CEQP	CRESTWOOD EQUITY PARTNERS LP	Equity
CERN	CERNER CORPORATION	Equity
CERS	CERUS CORPORATION	Equity
CEVA	Ceva Inc	Equity
CF	CF INDUSTRIES HOLDINGS, INC.	Equity
CFG	Citizens Financial Group, Inc.	Equity
CFR	CULLEN/FROST BANKERS INC.	Equity
CFX	Colfax Corporation	Equity
CG	The Carlyle Group LP	Equity
CGC	Canopy Growth Corporation	Equity
CGEN	Compugen Ltd.	Equity
CGNX	COGNEX CORPORATION	Equity
CHAD	Direxion Dly CSI 300 Chn A Shr Br 1X ETF	ETF
CHAU	Direxion Dly CSI 300 Chn A Shr Br 2X ETF	ETF
CHD	CHURCH & DWIGHT CO.	Equity

Securities List

Und Symbol	Company Name	Inst Type
CHE	Chemed Corporation	Equity
CHGG	CHEGG, INC	Equity
CHH	Choice Hotels International Inc.	Equity
CHIX	Global X China Financials ETF	ETF
CHK	CHESAPEAKE ENERGY CORPORATION	Equity
CHKP	CHECK POINT SOFTWARE TECHNOLOGIES LTD.	Equity
CHL	CHINA MOBILE LIMITED	Equity
CHNG	Change Healthcare Inc	Equity
CHRS	Coherus BioSciences, Inc.	Equity
CHRW	CH ROBINSON WORLDWIDE INC.	Equity
CHS	CHICO'S FAS, INC.	Equity
CHTR	Charter Communications Inc. Cl A	Equity
CHU	China Unicom (Hong Kong) Ltd.	Equity
CHUY	CHUY'S HOLDINGS, INC.	Equity
CHWY	Chewy, Inc.	Equity
CI	CIGNA CORPORATION	Equity
CIA	Citizens Inc.	Equity
CIEN	CIENA CORPORATION	Equity
CIG	Companhia Energetica de Minas Gerais - CEMIG (125)	Equity
CIM	CHIMERA INVESTMENT CORPORATION	Equity
CINF	Cincinnati Financial Corp.	Equity
CIT	CIT Group, Inc.	Equity
CKH	SEACOR Holdings, Inc.	Equity
CL	COLGATE-PALMOLIVE COMPANY	Equity
CLAR	Clarus Corporation	Equity
CLB	Core Laboratories N.V.	Equity
CLDR	Cloudera, Inc.	Equity
CLDT	Chatham Lodging Trust	Equity
CLDX	Celldex Therapeutics, Inc.	Equity
CLF	CLIFFS NATURAL RESOURCES INC.	Equity
CLFD	Clearfield, Inc.	Equity
CLGX	CoreLogic Inc.	Equity
CLH	CLEAN HARBORS INC	Equity
CLIR	ClearSign Combustion Corporation	Equity
CLLS	Cellectis S.A.	Equity
CLMT	Calumet Specialty Products Partners, L.P.	Equity
CLNE	CLEAN ENERGY FUELS CORPORATION	Equity
CLNY	Colony Capital, Inc.	Equity
CLR	CONTINENTAL RESOURCES, INC.	Equity
CLS	Celestica, Inc.	Equity
CLSD	Clearside Biomedical, Inc.	Equity
CLUB	Town Sports International Holdings Inc.	Equity
CLVS	CLOVIS ONCOLOGY, INC.	Equity
CLW	Clearwater Paper Corporation	Equity
CLX	CLOROX CO	Equity
CM	Canadian Imperial Bank of Commerce	Equity

Securities List

Und Symbol	Company Name	Inst Type
CMA	COMERICA, INC.	Equity
CMC	COMMERCIAL METALS COMPANY	Equity
CMCM	Cheetah Mobile Inc.	Equity
CMCSA	COMCAST CORPORATION	Equity
CMD	Cantel Medical Corporation	Equity
CME	CME GROUP INC.	Equity
CMG	CHIPOTLE MEXICAN GRILL, INC.	Equity
CMI	CUMMINS INC.	Equity
CMP	Compass Minerals International, Inc.	Equity
CMPR	CIMPRESS N.V.	Equity
CMRE	Costamare Inc.	Equity
CMRX	CHIMERIX, INC.	Equity
CMS	CMS ENERGY CORPORATION	Equity
CMTL	COMTECH TELECOMMUNICATION	Equity
CNC	CENTENE CORP	Equity
CNCE	Concert Pharmaceuticals, Inc.	Equity
CNDT	Conduent Incorporated	Equity
CNET	Chinanet Online Holdings, Inc.	Equity
CNI	CANADIAN NATIONAL RAILWAY	Equity
CNK	Cinemark Holdings, Inc.	Equity
CNO	CNO Financial Group, Inc.	Equity
CNP	CENTERPOINT ENERGY, INC.	Equity
CNQ	CANADIAN NATURAL RESOURCES LIMITED	Equity
CNR	Cornerstone Building Brands, Inc.	Equity
CNSL	Consolidated Communications Holdings, Inc.	Equity
CNTY	Century Casinos, Inc.	Equity
CNX	CNX Resources Corporation	Equity
CNXM	CNX Midstream Partners LP	Equity
CODI	Compass Diversified Holdings LLC	Equity
CODX	Co-Diagnostics, Inc.	Equity
COF	CAPITAL ONE FINANCIAL CORPORATION	Equity
COG	CABOT OIL & GAS CORPORATION	Equity
COHR	COHERENT,INC	Equity
COHU	Cohu, Inc.	Equity
COLL	Collegium Pharmaceutical, Inc.	Equity
COLM	COLUMBIA SPORTWEAR CO.	Equity
COMM	COMMSCOPE HOLDING CO, INC.	Equity
CONE	CyrusOne Inc.	Equity
CONN	Conn's, Inc.	Equity
COO	Cooper Companies, Inc.	Equity
COP	CONOCOPHILLIPS	Equity
COR	CoreSite Realty Corporation	Equity
CORE	Core-Mark Holding Company, Inc.	Equity
CORN	TEUCRIUM COMMODITY TRUST CORN FUND SHARES ETF	ETF
CORR	CorEnergy Infrastructure Trust, Inc.	Equity
CORT	Corcept Therapeutics Incorporated	Equity

Securities List

Und Symbol	Company Name	Inst Type
COST	COSTCO WHOLESALE CORPORATION	Equity
COTY	COTY INC.	Equity
COUP	Coupa Software Incorporated	Equity
COWN	Cowen Group, Inc.	Equity
CP	Canadian Pacific Railway Limited	Equity
CPA	Copa Holdings SA	Equity
CPB	CAMPBELL SOUP CO	Equity
CPE	CALLON PETROLEUM COMPANY	Equity
CPG	Crescent Point Energy Corp.	Equity
CPLP	Capital Product Partners LP	Equity
CPRI	Capri Holdings Limited (	Equity
CPRT	COPART INC	Equity
CPRX	CATALYST PHARMACEUTICAL PARTNES INC.	Equity
CQP	Cheniere Energy Ptnrs L.P.	Equity
CR	Crane Co.	Equity
CRBP	Corbus Pharmaceuticals Holdings, Inc.	Equity
CRC	California Resources Corporation	Equity
CREE	CREE, INC.	Equity
CRESY	Cresud Sociedad Anonima Comercial, Inmobiliaria, Financiera y Agropecuaria	Equity
CRH	CRH plc	Equity
CRI	CARTER'S , INC.	Equity
CRK	COMSTOCK RESOURCES INC.	Equity
CRL	Charles River Laboratories International, Inc.	Equity
CRM	SALESFORCE.COM, INC	Equity
CRMD	CorMedix Inc.	Equity
CRNT	Ceragon Networks Ltd.	Equity
CRON	Cronos Group Inc.	Equity
CROX	CROCS, INC.	Equity
CRS	CARPENTER TECHNOLOGY CORP.	Equity
CRSP	CRISPR Therapeutics AG	Equity
CRTO	CRITEO SA	Equity
CRUS	CIRRUS LOGIC INC.	Equity
CRWD	CrowdStrike Holdings, Inc.	Equity
CRY	CryoLife Inc	Equity
CS	CREDIT SUISSE GROUP AG	Equity
CSCO	CISCO SYSTEMS, INC.	Equity
CSGS	CSG Systems International Inc.	Equity
CSII	Cardiovascular Systems Inc.	Equity
CSIQ	Canadian Solar Inc	Equity
CSLT	CASTLIGHT HEALTH, INC.	Equity
CSOD	CORNERSTONE ONDEMAND, INC.	Equity
CSTE	CAESARSTONE SDOT-YAM LTD.	Equity
CSTM	CONSTELLIUM N.V	Equity
CSU	Capital Senior Living Corp.	Equity
CSV	Carriage Services, Inc.	Equity
CSX	CSX CORPORATION	Equity

Securities List

Und Symbol	Company Name	Inst Type
CTAS	CINTAS CORP.	Equity
CTB	COOPER TIRE & RUBBER CO.	Equity
CTG	Computer Task Group Incorporated	Equity
CTIC	Cell Therapeutics, Inc. (20 Shrs)	Equity
CTL	CENTURYLINK, INC.	Equity
CTLT	Catalent, Inc.	Equity
CTSH	COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION	Equity
CTSO	CYTOSORBENTS CORPORATION	Equity
CTVA	Corteva, Inc.	Equity
CTXS	CITRIX SYSTEMS, INC.	Equity
CUBE	CubeSmart	Equity
CURE	Direxion Daily Healthcare Bull 3X ETF	ETF
CUTR	CUTERA INC	Equity
CVA	COVANTA HOLDING CORPORATION	Equity
CVE	Cenovus Energy Inc.	Equity
CVEO	CIVEO CORPORATION	Equity
CVET	Covetrus, Inc.	Equity
CVGW	CALAVO GROWERS INC.	Equity
CVI	CVR Energy, Inc.	Equity
CVLT	Commvault Systems Inc	Equity
CVM	CEL-SCI Corporation	Equity
CVNA	Carvana Co.	Equity
CVS	CVS CAREMARK CORPORATION	Equity
CVX	CHEVRON CORPORATION	Equity
CWB	SPDR Barclays Convertible Secs ETF	ETF
CWEN	Clearway Energy, Inc.	Equity
CWENA	Clearway Energy, Inc. Class A	Equity
CWH	Camping World Holdings, Inc.	Equity
CWST	Casella Waste Systems Inc.	Equity
CX	CEMEX, S.A.B. DE C.V.	Equity
CXDC	China XD Plastics Company Limited	Equity
CXO	Concho Resources, Inc.	Equity
CXW	CORRECTIONS CORPORATION OF AMERICA	Equity
CYB	WisdomTree Chinese Yuan Strategy ETF	ETF
CYBR	CYBERARK SOFTWARE, LTD.	Equity
CYD	China Yuchai International Limited	Equity
CYH	COMMUNITY HEALTH SYSTEMS, INC.	Equity
CYTK	CYTOKINETICS, INCORPORATED	Equity
CZR	Caesars Entertainment Corporation	Equity
CZZ	Cosan Limited	Equity
D	DOMINION RESOURCES	Equity
DAKT	DAKTRONICS INC.	Equity
DAL	DELTA AIR LINES INC.	Equity
DAN	Dana Holding Corporation	Equity
DAR	Darling International, Inc.	Equity
DB	DEUTSCHE BANK AG	Equity

Securities List

Und Symbol	Company Name	Inst Type
DBA	POWERSHARES DB AGRICULTURE	ETF
DBB	PowerShares DB Base Metals ETF	ETF
DBC	PoweShares DB Commodity Index Tracking Fund	ETF
DBD	DIEBOLD, INCORPORATED	Equity
DBI	Designer Brands Inc. (	Equity
DBO	PowerShares DB Oil Fund	ETF
DBX	Dropbox, Inc.	Equity
DCI	Donaldson Company, Inc.	Equity
DCP	DCP Midstream, LP	Equity
DCPH	Deciphera Pharmaceuticals, Inc.	Equity
DD	DuPont de Nemours, Inc.	Equity
DDD	3D SYSTEMS CORPORATION	Equity
DDM	ProShares Ultra Dow30	ETF
DDOG	Datadog Inc	Equity
DDS	DILLARD'S INC	Equity
DE	DEERE & COMPANY	Equity
DECK	DECKERS OUTDOOR CORPORATION	Equity
DELL	Dell Technologies, Inc.	Equity
DEM	WisdomTree Emerging Markets Eq Inc ETF	ETF
DENN	Denny's Corp.	Equity
DEO	DIAGEO PLC	Equity
DFE	WisdomTree Europe SmallCap Dividend Fund	ETF
DFS	DISCOVER FINANCIAL SERVICES	Equity
DG	DOLLAR GENERAL CORPORATION	Equity
DGX	QUEST DIAGNOSTICS INC	Equity
DHC	Diversified Healthcare Trust (	Equity
DHI	DR HORTON INC.	Equity
DHR	DANAHER CORPORATION	Equity
DHT	DHT Holdings, Inc.	Equity
DHX	DHI Group, Inc.	Equity
DIA	SPDR DOW JONES INDUSTRIAL AVERAGE	ETF
DIG	ProShares Ultra Oil & Gas	ETF
DIN	DineEquity, Inc	Equity
DIOD	Diodes Incorporated	Equity
DIS	THE WALT DISNEY COMPANY	Equity
DISCA	Discovery Communications, Inc. Class A	Equity
DISCK	Discovery Communications, Inc.	Equity
DISH	DISH NETWORK CORPORATION	Equity
DK	Delek US Holdings, Inc.	Equity
DKL	Delek Logistics Partners LP	Equity
DKNG	DraftKings Inc.	Equity
DKS	DICK'S SPORTING GOODS INC.	Equity
DLB	DOLBY LABORATORIES, INC.	Equity
DLNG	Dynagas LNG Partners LP	Equity
DLPH	Delphi Technologies PLC	Equity
DLR	Digital Realty Trust Inc	Equity

Securities List

Und Symbol	Company Name	Inst Type
DLTH	Duluth Holdings Inc.	Equity
DLTR	DOLLAR TREE, INC.	Equity
DLX	DELUXE CORPORATION	Equity
DMLP	Dorchester Minerals LP	Equity
DMRC	Digimarc Corporation	Equity
DNKN	DUNKIN' BRANDS GROUP, INC.	Equity
DNLI	Denali Therapeutics Inc	Equity
DNN	Denison Mines Corp.	Equity
DNOW	NOW, INC.	Equity
DNR	DENBURY RESOURCES INC.	Equity
DOCU	Docusign Inc.	Equity
DOG	ProShares Short Dow30	ETF
DOMO	Domo, Inc.	Equity
DOV	DOVER CORPORATION	Equity
DOW	Dow Inc.	Equity
DOX	AMDOCS LTD	Equity
DOYU	Douyu International Holdings Ltd	Equity
DPZ	DOMINO'S PIZZA INC	Equity
DQ	Daqo New Energy Corp	Equity
DRD	DRDGOLD Ltd.	Equity
DRI	DARDEN RESTAURANTS, INC.	Equity
DRN	Direxion Daily Real Estate Bull 3x ETF	ETF
DRQ	DRIL-QUIP INC	Equity
DRRX	DURECT Corporation	Equity
DRV	Direxion Daily Real Estate Bear 3x ETF	ETF
DS	Drive Shack Inc.	Equity
DSX	DIANA SHIPPING INC	Equity
DT	Dynatrace Inc	Equity
DTE	DTE Energy Company	Equity
DTIL	Precision BioSciences Inc	Equity
DUG	ProShares UltraShort Oil & Gas	ETF
DUK	DUKE ENERGY CORPORATION	Equity
DVA	DaVita HealthCare Partners Inc.	Equity
DVAX	DYNAVAX TECHNOLOGIES CORPORATION	Equity
DVN	DEVON ENERGY CORPORATION	Equity
DVY	ISHARES DJ SELECT DIVIDEND	ETF
DXC	DXC Technology Company	Equity
DXCM	DexCom, Inc.	Equity
DXD	ProShares UltraShort Dow30 (25 Shares)	ETF
DXJ	WISDOMTREE JAPAN HEDGED EQUITY FUND	ETF
DXPE	DXP Enterprises, Inc.	Equity
DY	DYCOM INDUSTRIES INC.	Equity
EA	ELECTRONIC ARTS INC.	Equity
EAF	GrafTech International Ltd.	Equity
EAT	BRINKER INT'L, INC.	Equity
EB	Eventbrite, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
EBAY	EBAY INC.	Equity
EBIX	Ebix, Inc.	Equity
EBS	Emergent Biosolutions, Inc.	Equity
ECH	iShares MSCI Chile ETF	ETF
ECHO	Echo Global Logistics, Inc.	Equity
ECL	ECOLAB INC.	Equity
ECOM	CHANNELADVISOR CORPORATION	Equity
ECPG	Encore Capital Group Inc	Equity
ED	CON EDISON	Equity
EDAP	EDAP TMS S.A.	Equity
EDC	Direxion Daily Emerging Markets Bull 3X Shares (20	ETF
EDIT	Editas Medicine, Inc.	Equity
EDU	NEW ORIENTAL EDUCATION & TECHNOLOGY GROUP	Equity
EDZ	Direxion Daily Emerging Markets Bear 3X Share	ETF
EEFT	EURONET WORLDWIDE, INC.	Equity
EEM	ISHARES MSCI EMERGING MARKETS INDEX	ETF
EEV	ProShares UltraShort MSCI Emerging Mkts	ETF
EFA	ISHARES MSCI EAFE INDEX	ETF
EFAV	iShares Edge MSCI Min Vol EAFE	ETF
EFX	EQUIFAX INC.	Equity
EGHT	8x8 Inc	Equity
EGO	ELDORADO GOLD CORPORATION	Equity
EGOV	NIC Inc.	Equity
EGRX	Eagle Pharmaceuticals Inc.	Equity
EGY	VAALCO ENERGY INC	Equity
EHC	Encompass Health Corporation	Equity
EHTH	eHealth, Inc.	Equity
EIGI	Endurance International Group Holdings, Inc.	Equity
EIX	EDISON INTERNATIONAL	Equity
EL	THE EST	Equity
ELAN	Elanco Animal Health Incorporated	Equity
ELF	e.l.f. Beauty, Inc.	Equity
ELGX	Endologix, Inc.	Equity
ELS	Equity Lifestyle Properties, Inc.	Equity
ELY	CALLAWAY GOLF CO	Equity
EMB	iShares J.P. Morgan USD Emerging Markets Bond ETF	ETF
EMKR	EMCORE Corporation	Equity
EMLC	VanEck Vectors J.P. Morgan EM Local Currency Bond ETF	ETF
EMN	EASTMAN CHEMICAL COMPANY	Equity
EMR	EMERSON ELECTRIC COMPANY	Equity
ENB	Enbridge Inc	Equity
ENBL	ENABLE MIDSTREAM PARTNERS, LP	Equity
ENDP	ENDO HEALTH SOLUTIONS INC.	Equity
ENLC	EnLink Midstream, LLC	Equity
ENPH	Enphase Energy Inc.	Equity
ENR	Energizer Holdings, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
ENS	Energys	Equity
ENTA	Enanta Pharmaceuticals, Inc.	Equity
ENTG	Entegris, Inc.	Equity
ENV	Investnet, Inc.	Equity
ENVA	Enova International, Inc.	Equity
ENZ	ENZO BIOCHEM INC.	Equity
EOG	EOG RESOURCES, INC.	Equity
EOLS	Evolus, Inc.	Equity
EPAC	Actuant Corporation	Equity
EPAM	EPAM Systems, Inc.	Equity
EPAY	Bottomline Technologies (de), Inc.	Equity
EPC	Edgewell Personal Care Company	Equity
EPD	ENTERPRISE PRODUCTS PARTNERS L.P.	Equity
EPI	WisdomTree India Earning Fund	ETF
EPR	EPR Properties	Equity
EPV	ProShares UltraShort FTSE Europe	ETF
EPZM	Epizyme, Inc.	Equity
EQC	EQUITY COMMONWEALTH	Equity
EQH	AXA Equitable Holdings, Inc.	Equity
EQIX	EQUINIX, INC.	Equity
EQNR	Equinor ASA	Equity
EQR	EQUITY RESIDENTIAL	Equity
EQT	EQT Corporation	Equity
ERF	Enerplus Corporation	Equity
ERI	Eldorado Resorts, Inc.	Equity
ERIC	Ericsson	Equity
ERII	Energy Recovery Inc.	Equity
ERJ	Embraer S.A.	Equity
EROS	Eros International Plc	Equity
ERX	DIREXION DAILY ENERGY BULL 3X SHARES	ETF
ES	Eversource Energy	Equity
ESI	Element Solutions Inc.	Equity
ESNT	Essent Group Ltd.	Equity
ESPR	Esperion Therapeutics, Inc.	Equity
ESRT	Empire State Realty Trust, Inc.	Equity
ESS	Essex Property Trust Inc.	Equity
ESTC	Elastic N.V.	Equity
ET	Energy Transfer LP	Equity
ETFC	E*TRADE FINANCIAL CORPORATION	Equity
ETH	Ethan Allen Interiors Inc.	Equity
ETM	Entercom Communications Corp.	Equity
ETN	EATON CORPORATION PLC	Equity
ETR	ENERGY CORPORATION	Equity
ETRN	Equitrans Midstream Corp	Equity
ETSY	Etsy, Inc.	Equity
EUFN	iShares MSCI Europe Financials ETF	ETF

Securities List

Und Symbol	Company Name	Inst Type
EUO	PROSHARES ULTRASHORT EURO	ETF
EV	EATON VANCE CORP	Equity
EVC	Entravision Communications Corporation	Equity
EVER	EverQuote Inc	Equity
EVH	Evolent Health, Inc.	Equity
EVR	Evercore Partners Inc.	Equity
EVRG	Evergy, Inc.	Equity
EVRI	Everi Holdings Inc.	Equity
EW	EDWARDS LIFESCIENCES CORP.	Equity
EWA	ISHARES MSCI AUSTRALIA INDEX	ETF
EWC	iShares Canada Index ETF	ETF
EWG	iShares MSCI Germany Index Fund ETF	ETF
EWH	ISHARES MSCI HONG KONG INDEX	ETF
EWI	iShares MSCI Italy Index Fund	ETF
EWJ	ISHARES MSCI JAPAN INDEX	ETF
EWM	ISHARES MSCI MALAYSIA INDEX ETF	ETF
EWP	iShares MSCI Spain Capped	ETF
EWQ	iShares MSCI France	ETF
EWS	iShares MSCI Singapore	ETF
EWT	ISHARES TAIWAN INDEX ETF	ETF
EWU	iShares MSCI United Kingdom Index ETF	ETF
EWV	ISHARES MSCI MEXICO CAPPED ETF	ETF
EWY	ISHARES MSCI SOUTH KOREA CAPPED INDEX	ETF
EWZ	ISHARES MSCI BRAZIL CAPPED INDEX	ETF
EXAS	Exact Sciences Corp.	Equity
EXC	EXELON CORPORATION	Equity
EXEL	EXELIXIS, INC.	Equity
EXK	Endeavour Silver Corp.	Equity
EXP	EAGLE MATERIALS INC.	Equity
EXPD	EXPEDITORS INTERNATIONAL	Equity
EXPE	EXPEDIA INC.	Equity
EXPR	EXPRESS INC.	Equity
EXR	Extra Space Storage Inc.	Equity
EXTR	EXTREME METWORKS, INC.	Equity
EYE	National Vision Holdings, Inc.	Equity
EYPT	EyePoint Pharmaceuticals, Inc.	Equity
EZA	iShares MSCI South Africa Index	ETF
EZPW	EZCORP, INC	Equity
EZU	iShares MSCI Eurozone	ETF
F	FORD MOTOR COMPANY	Equity
FANG	DIAMONDBACK ENERGY, INC.	Equity
FAS	DIREXION DAILY FINANCIAL BULL 3X SHARES	ETF
FAST	FASTENAL COMPANY	Equity
FATE	Fate Therapeutics, Inc.	Equity
FAZ	DIREXION DAILY FINANCIAL BEAR 3X SHARES	ETF
FB	FACEBOOK, INC.	Equity

Securities List

Und Symbol	Company Name	Inst Type
FBC	Flagstar Bancorp Inc.	Equity
FBHS	Fortune Brands Home & Security Inc.	Equity
FBP	First BanCorp	Equity
FC	Franklin Covey Co.	Equity
FCEL	FUELCELL ENERGY, INC.	Equity
FCG	First Trust ISE-Revere Natural Gas ETF	ETF
FCN	FTI CONSULTING, INC.	Equity
FCX	FREEMPORT-MCMORAN COPPER & GOLD INC.	Equity
FDN	First Trust Dow Jones Internet ETF	ETF
FDP	Fresh Del Monte Produce Inc.	Equity
FDS	FACTSET RESEARCH SYSTEMS	Equity
FDX	FEDEX CORPORATION	Equity
FE	FIRSTENERGY CORP.	Equity
FENG	PHOENIX NEW MEDIA LIMITED	Equity
FET	Forum Energy Technologies, Inc.	Equity
FEYE	FIREEYE, INC.	Equity
FEZ	SPDR EURO STOXX 50 ETF	ETF
FFIV	F5 NETWORKS, INC.	Equity
FGEN	FibroGen, Inc.	Equity
FHI	Federated Hermes, Inc.	Equity
FHN	FIRST HORIZON NATIONAL CORPORATION	Equity
FI	Frank's International N.V.	Equity
FICO	FAIR ISAAC CORPORATION	Equity
FIS	Fidelity National Information Services, Inc.	Equity
FISV	FISERV INC	Equity
FITB	FIFTH THIRD BANCORP	Equity
FIVE	Five Below Inc	Equity
FIVN	Five9, Inc.	Equity
FIX	Comfort Systems USA Inc.	Equity
FIZZ	National Beverage Corp	Equity
FL	FOOT LOCKER, INC.	Equity
FLDM	Fluidigm Corporation	Equity
FLEX	FLEXTRONICS LTD	Equity
FLIR	FLIR SYSTEMS INC.	Equity
FLNT	Fluent, Inc.	Equity
FLO	FLOWERS FOODS, INC.	Equity
FLOW	SPX FLOW, Inc.	Equity
FLR	FLUOR CORPORATION	Equity
FLS	Flowserve Corp.	Equity
FLT	Fleetcor Technologies Inc.	Equity
FLWS	1-800-Flowers.com Inc.	Equity
FLXN	Flexion Therapeutics, Inc.	Equity
FLY	FLY LEASING LIMITED	Equity
FM	iShares MSCI Frontier 100 ETF	ETF
FMC	FMC CORPORATION	Equity
FN	Fabrinet	Equity

Securities List

Und Symbol	Company Name	Inst Type
FND	Floor & Decor Holdings, Inc.	Equity
FNF	FIDELITY NATIONAL FINANCIAL	Equity
FNKO	Funko, Inc.	Equity
FNV	Franco-Nevada Corporation	Equity
FOE	Ferro Corp	Equity
FOLD	Amicus Therapeutics, Inc.	Equity
FOR	Forestar Group Inc.	Equity
FORM	FormFactor Inc.	Equity
FOSL	FOSSIL, INC.	Equity
FOXA	(New) Fox Corporation Class A	Equity
FPI	Farmland Partners Inc.	Equity
FPRX	Five Prime Therapeutics, Inc.	Equity
FR	First Industrial Realty Trust	Equity
FRC	First Republic Bank	Equity
FRGI	Fiesta Restaurant Group Inc	Equity
FRO	FRONTLINE LIMITED	Equity
FRPT	Freshpet, Inc.	Equity
FSCT	ForeScout Technologies, Inc.	Equity
FSK	FS KKR Capital Corp.	Equity
FSLR	FIRST SOLAR, INC.	Equity
FSLY	Fastly, Inc.	Equity
FSM	Fortuna Silver Mines Inc.	Equity
FSTR	LB Foster Co.	Equity
FTAI	Fortress Transportation and Infrastructure Investors LLC	Equity
FTCH	Farfetch Limited	Equity
FTI	FMC TECHNOLOGIES, INC.	Equity
FTK	Flotek Industries Inc	Equity
FTNT	FORTINET INC.	Equity
FTV	Fortive Corporation	Equity
FULT	Fulton Financial Corporation	Equity
FUN	CEDAR FAIR, L.P.	Equity
FWONA	Formula One Group	Equity
FWONK	Liberty Media Corporation Series C Liberty Formula One	Equity
FXA	CurrencyShares Australian Dollar Trust	ETF
FXB	CurrencyShares British Pound Sterling Trust	ETF
FXC	CurrencyShares Canadian Dollar Trust	ETF
FXE	CURRENCYSHARES EURO TRUST	ETF
FXF	CurrencyShares Swiss Franc ETF	ETF
FXH	First Trust Health Care AlphaDEX ETF	ETF
FXI	ISHARES FTSE CHINA 25 INDEX FUND	ETF
FXP	ProShares UltraShort FTSE China 50	ETF
FXY	CURRENCYSHARES JAPANESE YEN TRUST	ETF
G	GENPACT LIMITED	Equity
GALT	GALECTIN THERAPEUTICS, INC.	Equity
GATX	GATX Corporation	Equity
GAU	Galiano Gold Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
GBT	Global Blood Therapeutics, Inc.	Equity
GBX	THE GREENBRIER COMPANIES, INC.	Equity
GCI	Gannett Co., Inc.	Equity
GCO	Genesco Inc.	Equity
GD	GENERAL DYNAMICS CORPORATION	Equity
GDDY	GoDaddy Inc.	Equity
GDEN	Golden Entertainment, Inc.	Equity
GDOT	Green Dot Corporation	Equity
GDS	GDS Holdings Limited	Equity
GDX	MARKET VECTORS GOLD MINERS ETF	ETF
GDXJ	VANECK VECTORS JUNIOR GOLD MINERS ETF	ETF
GE	GENERAL ELECTRIC COMPANY	Equity
GEF	Greif, Inc.	Equity
GEL	Genesis Energy L.P.	Equity
GEN	Genesis Healthcare, Inc.	Equity
GEO	GEO Group Inc (The)	Equity
GEOS	GEOSPACE TECHNOLOGIES CORPORATION	Equity
GERN	GERON CORPORATION	Equity
GES	GUESS? INC.	Equity
GFF	Griffon Corporation	Equity
GFI	GOLD FIELDS LTD.	Equity
GGAL	GRUPO FINANCIERO GALICIA S.A.	Equity
GGB	GERDAU S.A. (ADR)	Equity
GGG	GRACO, INC.	Equity
GH	Guardant Health, Inc.	Equity
GHL	Greenhill & Co., Inc.	Equity
GIII	G-III Apparel Group Ltd	Equity
GIL	Gildan Activewear Inc	Equity
GILD	GILEAD SCIENCES INC.	Equity
GIS	GENERAL MILLS, INC.	Equity
GL	Globe Life Inc.	Equity
GLAD	Gladstone Capital Corporation	Equity
GLD	SPDR GOLD TRUST	ETF
GLDD	Great Lakes Dredge & Dock	Equity
GLIBA	GCI Liberty, Inc.	Equity
GLL	ProShares UltraShort Gold	ETF
GLNG	Golar LNG Ltd	Equity
GLOB	Globant S.A.	Equity
GLOG	GASLOG LTD.	Equity
GLOP	GasLog Partners LP	Equity
GLP	Global Partners LP	Equity
GLPI	Gaming and Leisure Properties Inc	Equity
GLRE	Greenlight Capital Re, Ltd.	Equity
GLUU	Glu Mobile Inc	Equity
GLW	CORNING INC.	Equity
GLYC	GlycoMimetics, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
GM	GENERAL MOTORS COMPANY	Equity
GME	GAMESTOP CORPORATION	Equity
GMED	GLOBUS MEDICAL, INC.	Equity
GMLP	Golar LNG Partners LP	Equity
GMS	GMS Inc.	Equity
GNC	GNC HOLDINGS INC.	Equity
GNCA	Genocea Biosciences, Inc.	Equity
GNE	Genie Energy Ltd.	Equity
GNRC	Generac Holdings Inc	Equity
GNTX	GENTEX CORP.	Equity
GNW	GENWORTH FINANCIAL INC.	Equity
GO	Grocery Outlet Holding Corp	Equity
GOGL	Golden Ocean Group Limited	Equity
GOGO	GOGO, INC.	Equity
GOLD	Barrick Gold Corporation	Equity
GOOD	Gladstone Commercial Corporation	Equity
GOOG	Alphabet Inc. Class C	Equity
GOOGL	Alphabet Inc. Class A	Equity
GOOS	Canada Goose Holdings Inc.	Equity
GORO	Gold Resource Corporation	Equity
GOSS	Gossamer Bio Inc	Equity
GPC	GENUINE PARTS	Equity
GPI	GROUP 1 AUTOMOTIVE INC.	Equity
GPK	Graphic Packaging Holding Company	Equity
GPN	GLOBAL PAYMENTS INC.	Equity
GPOR	Gulfport Energy Corporation	Equity
GPRE	Green Plains Renewable Energy, Inc.	Equity
GPRO	GOPRO, INC.	Equity
GPS	GAP INC.	Equity
GRA	W.R. GRACE & CO.	Equity
GREK	Global X MSCI Greece ETF	ETF
GRMN	GARMIN LTD.	Equity
GROW	U.S. Global Investors, Inc.	Equity
GRPN	GROUPON, INC.	Equity
GRUB	GRUBHUB INC.	Equity
GS	THE GOLDMAN SACHS GROUP, INC.	Equity
GSAT	Globalstar, Inc	Equity
GSK	GLAXOSMITHKLINE PLC	Equity
GSKY	GreenSky, Inc.	Equity
GSM	Globe Specialty Metals Inc	Equity
GSX	GSX Techedu Inc	Equity
GT	GOODYEAR TIRE & RUBBER COMPANY	Equity
GTE	Gran Tierra Energy Inc.	Equity
GTES	Gates Industrial Corporation plc	Equity
GTLS	Chart Industries Inc	Equity
GTN	Gray Television, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
GTT	GTT Communications, Inc.	Equity
GTX	Garrett Motion Inc	Equity
GTY	Getty Realty Corp.	Equity
GUSH	Direxion Dly S&P Oil&Gs Ex&Prd BI 3X ETF	ETF
GV	Goldfield Corp.	Equity
GVA	Granite Construction Incorporated	Equity
GWPH	GW PHARMACEUTICALS PLC	Equity
GWRE	Guidewire Software, Inc.	Equity
GWW	GRAINGER, W.W. INC.	Equity
GXG	Global X MSCI Colombia ETF	ETF
H	Hyatt Hotels Corporation	Equity
HA	Hawaiian Holdings, Inc.	Equity
HACK	PureFunds ISE Cyber Security ETF	ETF
HAIN	THE HAIN CELESTIAL GROUP, INC.	Equity
HAL	HALLIBURTON COMPANY	Equity
HALO	Halozyme Therapeutics Inc.	Equity
HAS	HASBRO INC.	Equity
HBAN	HUNTINGTON BANCSHARES INCORPORATED	Equity
HBI	Hanesbrands Inc.	Equity
HBM	HudBay Minerals, Inc.	Equity
HCA	HCA HOLDINGS, INC.	Equity
HCC	Warrior Met Coal, Inc.	Equity
HCR	Hi-Crush Inc.	Equity
HD	THE HOME DEPOT, INC.	Equity
HDB	HDFC BANK LTD	Equity
HDGE	AdvisorShares Ranger Equity Bear ETF	ETF
HDS	HD SUPPLY HOLDINGS, INC.	Equity
HDSN	Hudson Technologies, Inc.	Equity
HE	Hawaiian Electric Industries Inc.	Equity
HEAR	Turtle Beach Corporation	Equity
HEDJ	WisdomTree Europe Hedged Equity Fund	ETF
HEES	H&E Equipment Services, Inc.	Equity
HEI	HEICO Corporation	Equity
HELE	HELEN OF TROY LTD	Equity
HEP	Holly Energy Partners L.P.	Equity
HES	HESS CORPORATION	Equity
HEXO	HEXO Corp.	Equity
HFC	HOLLYFRONTIER CORPORATION	Equity
HGV	Hilton Grand Vacations Inc.	Equity
HHC	The Howard Hughes Corporation	Equity
HI	Hillenbrand Inc	Equity
HIBB	Hibbett Sports Inc	Equity
HIG	THE HARTFORD FINANCIAL SERVICES GROUP, INC.	Equity
HII	Huntington Ingalls Industries, Inc.	Equity
HIMX	Himax Technologies, Inc.	Equity
HL	HECLA MINING COMPANY	Equity

Securities List

Und Symbol	Company Name	Inst Type
HLF	HERBALIFE LTD.	Equity
HLIT	Harmonic Inc	Equity
HLT	HILTON WORLDWIDE HOLDINGS INC.	Equity
HLX	HELIX ENERGY SOLUTIONS GROUP INC	Equity
HMC	HONDA MOTOR COMPANY LTD	Equity
HMHC	Houghton Mifflin Harcourt Co.	Equity
HMSY	HMS Holdings Corp.	Equity
HMY	HARMONY GOLD MINING COMPANY LIMITED	Equity
HOG	HARLEY-DAVIDSON, INC.	Equity
HOLX	HOLOGIC, INC.	Equity
HOMB	Home Bancshares, Inc.	Equity
HOME	At Home Group Inc.	Equity
HON	HONEYWELL INTERNATIONAL INC.	Equity
HP	HELMERICH & PAYNE INC	Equity
HPE	Hewlett Packard Enterprise Company	Equity
HPQ	HP Inc.	Equity
HPR	High Point Resources Corp.	Equity
HQY	HealthEquity, Inc.	Equity
HR	Healthcare Realty Trust Incorporated	Equity
HRB	H&R BLOCK, INC.	Equity
HRC	Hill-Rom Holdings, Inc.	Equity
HRI	Herc Holdings Inc.	Equity
HRL	HORMEL FOODS CORPORATION	Equity
HROW	Harrow Health Inc	Equity
HRTG	Heritage Insurance Holdings, Inc.	Equity
HRTX	Heron Therapeutics, Inc.	Equity
HSBC	HSBC HOLDINGS PLC	Equity
HSC	Harsco Corporation	Equity
HSIC	Henry Schein, Inc.	Equity
HSII	Heidrick & Struggles International Inc.	Equity
HST	Host Hotels & Resorts	Equity
HSY	HERSHEY CO THE	Equity
HT	Hersha Hospitality Trust	Equity
HTA	Healthcare Trust of America Inc.	Equity
HTGC	Hercules Capital, Inc.	Equity
HTH	Hilltop Holdings Inc.	Equity
HTHT	China Lodging Group, Limited	Equity
HUBG	Hub Group, Inc.	Equity
HUBS	HubSpot, Inc.	Equity
HUM	HUMANA INC.	Equity
HUN	HUNTSMAN CORPORATION	Equity
HUYA	HUYA Inc.	Equity
HWC	Hancock Whitney Corporation	Equity
HWM	Howmet Aerospace Inc	Equity
HXL	HEXCEL CORPORATION	Equity
HYG	ISHARES IBOX \$ HIGH YIELD CORPORATE BOND	ETF

Securities List

Und Symbol	Company Name	Inst Type
HYLD	AdvisorShares Peritus High Yield ETF	ETF
HZNP	Horizon Pharma, Inc.	Equity
HZO	MARINEMAX , INC.	Equity
IAC	IAC/InterActiveCorp	Equity
IAG	IAMGOLD CORPORATION	Equity
IART	Integra LifeSciences Holdings Corporation	Equity
IAT	iShares US Regional Banks	ETF
IAU	iShares Gold Trust	ETF
IBB	ISHARES NASDAQ BIOTECHNOLOGY	ETF
IBKC	IBERIABANK Corporation	Equity
IBKR	Interactive Brokers Group Inc	Equity
IBM	INTERNATIONAL BUSINESS MACHINES CORPORATION	Equity
IBN	ICICI BANK LIMITED	Equity
ICAD	iCAD Inc.	Equity
ICE	Intercontinental Exchange Inc	Equity
ICHR	Ichor Holdings, Ltd.	Equity
ICLR	ICON Public Limited Company	Equity
ICPT	INTERCEPT PHARMACEUTICALS, INC.	Equity
IDCC	INTERDIGITAL, INC.	Equity
IDEX	Ideanomics, Inc.	Equity
IDRA	IDERA PHARMACEUTICALS, INC.	Equity
IDT	IDT Corporation	Equity
IDXX	IDEXX Laboratories, Inc.	Equity
IEF	iShares 7 -10 Year Treasury Bond ETF	Equity
IEI	iShares 3-7 Year Treasury Bond ETF	ETF
IEMG	iShares Core MSCI Emerging Markets	ETF
IEO	iShares U.S. Oil&Gas Explor&Prodtn	ETF
IEP	ICAHN ENTERPRISES, L.P.	Equity
IEV	iShares Europe	ETF
IEX	IDEX Corporation	Equity
IEZ	iShares U.S. Oil Equipment&Services	ETF
IFF	International Flavors & Fragrances Inc.	Equity
IGN	iShares North American Tech-Multimd Ntwk	ETF
IGT	International Game Technology Plc	Equity
IGV	Tech-Software Sector ETF	ETF
IHRT	iHeartMedia Inc	Equity
IIPR	Innovative Industrial Properties, Inc.	Equity
IIVI	II-VI INCORPORATED	Equity
IJH	iShares Core S&P Mid-Cap ETF	ETF
IJR	iShares Core S&P Small-Cap ETF	ETF
IJS	iShares S&P Small-Cap 600 Value	ETF
ILF	iShares Latin America 40	ETF
ILMN	ILLUMINA INC.	Equity
IMAX	IMAX CORPORATION	Equity
IMGN	IMMUNOGEN INC	Equity
IMKTA	Ingles Markets, Incorporated	Equity

Securities List

Und Symbol	Company Name	Inst Type
IMMR	IMMERSION CORP	Equity
IMMU	IMMUNOMEDICS INC	Equity
IMO	IMPERIAL OIL LTD.	Equity
INCY	INCYTE GENOMICS INC	Equity
INDA	iShares MSCI India	ETF
INDL	Direxion Daily India Bull 3x ETF	ETF
INFI	INFINITY PHARMACEUTICALS, INC.	Equity
INFN	Infinera Corporation	Equity
INFO	IHS Markit Ltd.	Equity
INFY	INFOSYS LTD.	Equity
ING	ING GROEP N.V.	Equity
INGN	Inogen, Inc.	Equity
INGR	Ingredion Incorporated	Equity
INO	INOVIO PHARMACEUTICALS, INC.	Equity
INOV	Inovalon Holdings, Inc.	Equity
INSG	Inseego Corporation	Equity
INSM	Insmmed, Inc.	Equity
INSP	Inspire Medical Systems Inc	Equity
INT	World Fuel Services Corporation	Equity
INTC	INTEL CORPORATION	Equity
INTU	INTUIT CORP	Equity
INVA	Innoviva, Inc.	Equity
INVE	Identiv Inc.	Equity
INWK	InnerWorkings, Inc.	Equity
IO	ION Geophysical Corporation	Equity
IONS	Ionis Pharmaceuticals, Inc.	Equity
IOVA	Iovance Biotherapeutics, Inc.	Equity
IP	INTERNATIONAL PAPER COMPANY	Equity
IPG	THE INTERPUBLIC GROUP OF COMPANIES, INC.	Equity
IPGP	IPG Photonics Corp	Equity
IPHI	Inphi Corporation	Equity
IPI	Intrepid Potash, Inc.	Equity
IQ	iQIYI, Inc.	Equity
IQV	IQVIA Holdings Inc.	Equity
IR	INGERSOLL-RAND PLC	Equity
IRBT	iRobot Corporation	Equity
IRDM	Iridium Communications Inc.	Equity
IRET	Investors Real Estate Trust	Equity
IRM	IRON MOUNTAIN INC. (elec div)	Equity
IRT	Independence Realty Trust, Inc.	Equity
IRWD	Ironwood Pharmaceuticals Inc	Equity
ISBC	Investors Bancorp, Inc	Equity
ISEE	IVERIC bio, Inc.	Equity
ISRG	INTUITIVE SURGICAL, INC.	Equity
IT	Gartner, Inc.	Equity
ITA	iShares US Aerospace and Defense ETF	ETF

## Securities List

Und Symbol	Company Name	Inst Type
ITB	ISHARES U.S. HOME CONSTRUCTION ETF	ETF
ITCI	Intra-Cellular Therapies, Inc.	Equity
ITGR	Integer Holdings Corporation	Equity
ITRI	ITRON, INC.	Equity
ITT	ITT Inc.	Equity
ITUB	ITAU UNIBANCO HOLDING S.A.	Equity
ITW	ILLINOIS TOOL WORKS INC.	Equity
IVAC	Intevac Inc.	Equity
IVR	INVESCO MORTGAGE CAPITAL INCCOM	Equity
IVV	iShares Core S&P 500 ETF	ETF
IVW	iShares S&P 500 Growth ETF	ETF
IVZ	Invesco Ltd	Equity
IWB	iShares Russell 1000	ETF
IWC	iSHARES RUSSELL MICROCAP INDEX	ETF
IWD	ISHARES RUSSELL 1000 VALUE ETF	ETF
IWF	iShares Russell 1000 Growth ETF	ETF
IWM	ISHARES RUSSELL 2000 INDEX	ETF
IWN	ISHRS RUSSELL 2000 VALUE ETF	ETF
IWO	ISHRS RUSSELL 2000 GROWTH INDX	ETF
IWP	iShares Russell Midcap Growth Index Fund ETF	ETF
IWR	ISHARES RUSSELL MIDCAP INDEX FUND	ETF
IWS	ISHARES RUSSELL MIDCAP VALUE INDEX FUND	ETF
IYE	ISHARES DJ US ENERGY SECTOR ETF	ETF
IYM	ISHARES DOW JONES U.S. BASIC MATERIALS SECT	ETF
IYR	ISHARES DOW JONES US REAL ESTATE	ETF
IYT	ISHARES DOW JONES TRANSPORTATION AVERAGE	ETF
IYW	iShares US Technology	ETF
IYZ	iShares US Telecommunications	ETF
J	Jacobs Engineering Group Inc.	Equity
JACK	JACK IN THE BOX, INC	Equity
JAZZ	Jazz Pharmaceuticals Plc	Equity
JBHT	JB HUNT TRANSPORT SERVICES INC.	Equity
JBL	JABIL CIRCUIT INC.	Equity
JBLU	JETBLUE AIRWAYS CORPORATI	Equity
JBT	John Bean Technologies Corporation	Equity
JCI	Johnson Controls International plc	Equity
JCOM	j2 Global, Inc.	Equity
JD	JD.COM, INC.	Equity
JDST	DIREXION DAILY JR GLD MNRS BEAR 3X ETF	ETF
JE	Just Energy Group Inc.	Equity
JEF	Jefferies Financial Group Inc.	Equity
JETS	US Global Jets ETF	ETF
JILL	J.Jill, Inc.	Equity
JKHY	Jack Henry & Associates Inc.	Equity
JKS	Jinkosolar Holding Company Limited	Equity
JLL	Jones Lang LaSalle Incorporated	Equity

Securities List

Und Symbol	Company Name	Inst Type
JMIA	Jumia Technologies AG	Equity
JNCE	Jounce Therapeutics, Inc.	Equity
JNJ	JOHNSON & JOHNSON	Equity
JNK	SPDR BARCLAYS HIGH YIELD BOND	ETF
JNPR	JUNIPER NETWORKS, INC.	Equity
JNUG	DIREXION DAILY JR GLD MNRS BULL 3X ETF	ETF
JO	iPath Series B Bloomberg Coffee Subindex Total Return ETN	ETF
JOE	ST. JOE CORPORATION	Equity
JPM	JPMORGAN CHASE & COMPANY	Equity
JWN	NORDSTROM INC.	Equity
K	KELLOGG COMPANY	Equity
KALA	Kala Pharmaceuticals Inc	Equity
KALU	Kaiser Aluminum Corporation	Equity
KAR	KAR AUCTION SERVICES, INC.	Equity
KBE	SPDR S&P BANK ETF	ETF
KBH	KB HOME	Equity
KBR	KBR, Inc.	Equity
KBWB	PowerShares KBW Bank ETF	ETF
KDP	Keurig Dr. Pepper Inc.	Equity
KEP	KOREA ELECTRIC POWER CORP.	Equity
KEX	KIRBY CORPORATION	Equity
KEY	KEYCORP	Equity
KEYS	Keysight Technologies Inc.	Equity
KFY	KORN/FERRY INTERNATIONAL	Equity
KGC	KINROSS GOLD CORPORATION	Equity
KHC	The Kraft Heinz Company	Equity
KIE	SPDR S&P Insurance ETF	ETF
KIM	KIMCO REALTY CORP.	Equity
KIN	Kindred Biosciences, Inc.	Equity
KIRK	Kirkland's Inc.	Equity
KKR	KKR & Co. LP	Equity
KL	Kirkland Lake Gold Ltd.	Equity
KLAC	KLA-TENCOR CORPORATION	Equity
KLIC	KULICKE AND SOFFA IND INC	Equity
KMB	KIMBERLY-CLARK CORPORATION	Equity
KMI	KINDER MORGAN, INC.	Equity
KMT	Kennametal Inc.	Equity
KMX	CARMAX INC.	Equity
KN	KNOWLES CORPORATION	Equity
KNDI	Kandi Technologies Corporation	Equity
KNOP	KNOT Offshore Partners LP	Equity
KNX	Knight-Swift Transportation Holdings Inc.	Equity
KO	THE COCA-COLA COMPANY	Equity
KODK	Eastman Kodak Company	Equity
KOL	Market Vectors Coal ETF	ETF
KOLD	ProShares UltraShort Bloomberg Natrl Gas	ETF

Securities List

Und Symbol	Company Name	Inst Type
KOPN	Kopin Corporation	Equity
KOS	Kosmos Energy Ltd	Equity
KPTI	KARYOPHARM THERAPEUTICS, INC.	Equity
KR	THE KROGER COMPANY	Equity
KRA	Kraton Performance Polymers Inc.	Equity
KRC	Kilroy Realty Corp.	Equity
KRE	SPDR S&P REGIONAL BANKING ETF	ETF
KRNT	Kornit Digital Ltd.	Equity
KRNY	Kearny Financial Corp.	Equity
KRO	Kronos Worldwide, Inc.	Equity
KSS	KOHL'S CORPORATION	Equity
KSU	KANSAS CITY SOUTHERN	Equity
KTOS	Kraton Defense & Security Solutions, Inc.	Equity
KW	Kennedy-Wilson Holdings Inc.	Equity
KWEB	KraneShares CSI China Internet ETF	ETF
KYN	Kayne Anderson MLP Investment Company	Equity
L	LOEWS CORPORATION	Equity
LABD	Direxion Daily S&P Biotech Bear 3X ETF	ETF
LABU	Direxion Daily S&P Biotech Bull 3X ETF	ETF
LAD	Lithia Motors Inc	Equity
LADR	Ladder Capital Corp	Equity
LAMR	LAMAR ADVERTISING COMPANY	Equity
LAUR	Laureate Education, Inc.	Equity
LAZ	LAZARD LTD.	Equity
LB	L BRANDS, INC.	Equity
LBRDK	Liberty Broadband Corporation	Equity
LBTYA	LIBERTY GLOBAL INC	Equity
LBTYK	LIBERTY GLOBAL PLC	Equity
LC	LendingClub Corporation	Equity
LCI	LANNETT COMPANY, INC.	Equity
LCII	LCI Industries (LCII)	Equity
LCTX	Lineage Cell Therapeutics, Inc	Equity
LDL	Lydall, Inc	Equity
LDOS	LUMOS NETWORKS CORPORATION	Equity
LE	LANDS' END, INC.	Equity
LEA	Lear Corporation	Equity
LEAF	Leaf Group Ltd.	Equity
LECO	Lincoln Electric Holdings, Inc.	Equity
LEE	Lee Enterprises, Incorporated	Equity
LEG	LEGGETT & PLATT, INC.	Equity
LEJU	Leju Holdings Limited	Equity
LEN	LENNAR CORPORATION	Equity
LEVI	Levi Strauss & Co.	Equity
LFC	CHINA LIFE INSURANCE CO., LTD.	Equity
LGFA	Lions Gate Entertainment Corp.	Equity
LGIH	LGI Homes, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
LGND	Ligand Pharmaceuticals Inc.	Equity
LH	LABORATORY CORP OF AMER HLDG	Equity
LHCG	LHC Group, Inc.	Equity
LHX	L3Harris Technologies, Inc.	Equity
LII	LENNOX INTERNATIONAL, INC.	Equity
LILA	LiLAC Group	Equity
LILAK	Liberty LiLAC Group	Equity
LIN	Linde plc	Equity
LIT	Global X Lithium & Battery ETF	ETF
LITE	Lumentum Holdings Inc.	Equity
LIVN	LivaNova PLC	Equity
LJPC	La Jolla Pharmaceutical Company	Equity
LK	Luckin Coffee Inc.	Equity
LKQ	LKQ Corporation	Equity
LL	Lumber Liquidators Holdings Inc	Equity
LLNW	Limelight Networks, Inc.	Equity
LLY	ELI LILLY AND COMPANY	Equity
LMNX	Luminex Corporation	Equity
LMT	LOCKHEED MARTIN CORPORATION	Equity
LNC	LINCOLN NATIONAL CORPORATION	Equity
LNDC	Landec Corporation	Equity
LNG	CHENIERE ENERGY, INC.	Equity
LNN	Lindsay Corporation	Equity
LNT	Alliant Energy Corporation	Equity
LOCO	EL POLLO LOCO HOLDINGS, INC.	Equity
LOGI	Logitech International S.A.	Equity
LOGM	LogMein, Inc.	Equity
LOPE	Grand Canyon Education, Inc.	Equity
LORL	Loral Space & Communications, Inc.	Equity
LOW	LOWE'S COMPANIES INC.	Equity
LPCN	Lipocine Inc.	Equity
LPI	Laredo Petroleum Holdings, Inc.	Equity
LPL	LG Display Co., Ltd.	Equity
LPLA	LPL Financial Holdings Inc.	Equity
LPSN	LivePerson, Inc.	Equity
LPX	LOUISIANA-PACIFIC CORPORATION	Equity
LQD	iShares iBoxx \$ Invst Grade Crp Bond	ETF
LQDT	LIQUIDITY SERVICES, INC.	Equity
LRCX	LAM RESEARCH CORPORATION	Equity
LRN	K12, Inc.	Equity
LSCC	Lattice Semiconductor Corporation	Equity
LSI	Life Storage, Inc.	Equity
LSTR	LANDSTAR SYSTEM INC	Equity
LSXMA	The Liberty SiriusXM Group	Equity
LTC	LTC Properties Inc.	Equity
LTHM	Livent Corporation	Equity

Securities List

Und Symbol	Company Name	Inst Type
LTRPA	Liberty TripAdvisor Holdings, Inc.	Equity
LULU	LULULEMON ATHLETICA INC.	Equity
LUV	SOUTHWEST AIRLINES COMPANY	Equity
LVGO	Livongo Health Inc	Equity
LVS	LAS VEGAS SANDS CORPORATION	Equity
LW	Lamb Weston Holdings, Inc.	Equity
LX	LexinFintech Holdings Ltd.	Equity
LXP	Lexington Realty Trust	Equity
LXRX	Lexicon Pharmaceuticals, Inc.	Equity
LXU	LSB Industries Inc.	Equity
LYB	LYONDELLBASELL INDUSTRIES NV	Equity
LYFT	Lyft, Inc.	Equity
LYG	Lloyds Banking Group Plc ADR	Equity
LYV	Live Nation Entertainment Inc	Equity
LZB	LA-Z-BOY INC.	Equity
M	MACY'S, INC.	Equity
MA	MASTERCARD INCORPORATED	Equity
MAA	Mid-America Apartment Communities Inc.	Equity
MAC	THE MACERICH COMPANY	Equity
MACK	Merrimack Pharmaceuticals Inc	Equity
MAG	MAG Silver Corp.	Equity
MAIN	Main Street Capital Corporation	Equity
MAN	MANPOWERGROUP INC.	Equity
MANH	MANHATTAN ASSOCIATES INC.	Equity
MANT	ManTech International Corporation	Equity
MANU	Manchester United plc	Equity
MAR	MARRIOTT INTERNATIONAL, INC.	Equity
MARK	Remark Holdings, Inc.	Equity
MAS	MASCO CORP.	Equity
MASI	Masimo Corporation	Equity
MAT	MATTEL, INC.	Equity
MATX	Matson, Inc.	Equity
MAXR	Maxar Technologies Inc.	Equity
MBB	iShares Barclays MBS Bond Fund ETF	ETF
MBI	MBIA INC.	Equity
MBT	MOBILE TELE SYSTEMS OJSC	Equity
MBUU	Malibu Boats, Inc.	Equity
MCD	MCDONALD'S CORPORATION	Equity
MCF	Contango Oil & Gas Co	Equity
MCHI	iShares MSCI China ETF	ETF
MCHP	MICROCHIP TECHNOLOGY INC	Equity
MCK	MCKESSON CORPORATION	Equity
MCO	MOODY'S CORPORATION	Equity
MCRB	Seres Therapeutics, Inc.	Equity
MCRI	MONRACH CASINO & RESORT, INC	Equity
MD	Mednax Inc	Equity

Securities List

Und Symbol	Company Name	Inst Type
MDB	MongoDB, Inc.	Equity
MDC	M.D.C. HOLDINGS INC.	Equity
MDCA	MDC Partners Inc.	Equity
MDGL	Madrigal Pharmaceuticals, Inc.	Equity
MDLA	Medallia Inc	Equity
MDLZ	MONDELEZ INTERNATIONAL, INC.	Equity
MDP	Meredith Corporation	Equity
MDRX	Allscripts Healthcare Solutions, Inc.	Equity
MDT	MEDTRONIC, INC.	Equity
MDY	SPDR S&P MIDCAP 400	ETF
MED	Medifast, Inc.	Equity
MEET	MEETME, INC.	Equity
MEI	METHODE ELECTRONICS, INC.	Equity
MEIP	MEI PHARMA, INC.	Equity
MELI	Mercadolibre Inc	Equity
MEOH	Methanex Corp.	Equity
MERC	Mercer International Inc.	Equity
MET	METLIFE, INC.	Equity
MFC	MANULIFE FINANCIAL CORPORATION	Equity
MFGP	Micro Focus International plc	Equity
MFIN	Medallion Financial Corporation	Equity
MGA	Magna International Inc.	Equity
MGI	MoneyGram International Inc	Equity
MGLN	Magellan Health, Inc.	Equity
MGM	MGM RESORTS INTERNATIONAL	Equity
MGNX	MacroGenics, Inc.	Equity
MGPI	MGP Ingredients Inc.	Equity
MHK	MOHAWK INDUSTRIES, INC.	Equity
MHLD	MAIDEN HOLDINGS LTDSHS	Equity
MIC	Macquarie Infrastructure Company Trust	Equity
MIDD	The Middleby Corporation	Equity
MIK	THE MICHAELS COMPANIES, INC.	Equity
MIND	Mitcham Industries, Inc.	Equity
MINI	MOBILE MINI, INC.	Equity
MITK	Mitek Systems, Inc.	Equity
MITT	AG Mortgage Investment Trust, Inc.	Equity
MJ	ETFMG Alternative Harvest ETF	ETF
MKC	MCCORMICK AND COMPANY, INC.	Equity
MKSI	MKS Instruments, Inc.	Equity
MKTX	MarketAxess Holdings Inc.	Equity
MLCO	Melco Resorts & Entertainment Limited	Equity
MLHR	Herman Miller Inc.	Equity
MLM	MARTIN MARIETTA MATERIALS INC	Equity
MMC	MARSH & MCLENNAN INC	Equity
MMLP	MARTIN MIDSTREAM PARTNERS LP	Equity
MMM	3M COMPANY	Equity

Securities List

Und Symbol	Company Name	Inst Type
MMP	MAGELLAN MIDSTREAM PARTNERS L.P	Equity
MMSI	Merit Medical Systems, Inc.	Equity
MMYT	MakeMyTrip Ltd	Equity
MNK	MALLINCKRODT PLC	Equity
MNKD	MANNKIND CORPORATION	Equity
MNRO	Monro, Inc.	Equity
MNST	MONSTER BEVERAGE CORPORATION	Equity
MNTA	MOMEMTA PHARMACEUTICALS, INC	Equity
MNTX	Manitex International Inc	Equity
MO	ALTRIA GROUP INC.	Equity
MOBL	MobileIron, Inc.	Equity
MODN	MODEL N, INC.	Equity
MOH	Molina Healthcare Inc.	Equity
MOMO	Momo Inc.	Equity
MOO	Market Vectors Agribusiness ETF	ETF
MOS	THE MOSAIC COMPANY	Equity
MOV	Movado Group, Inc.	Equity
MPAA	Motorcar Parts of America, Inc.	Equity
MPC	MARATHON PETROLEUM CORPORATION	Equity
MPLX	MPLX LP	Equity
MPW	Medical Properties Trust Inc	Equity
MPWR	Monolithic Power Systems Inc	Equity
MR	Montage Resources Corp	Equity
MRC	MRC Global Inc.	Equity
MRCY	Mercury Systems, Inc.	Equity
MRK	MERCK & COMPANY INC.	Equity
MRKR	Marker Therapeutics, Inc.	Equity
MRNA	Moderna, Inc.	Equity
MRNS	Marinus Pharmaceuticals, Inc.	Equity
MRO	MARATHON OIL CORPORATION	Equity
MRTX	Mirati Therapeutics, Inc.	Equity
MRVL	MARVELL TECHNOLOGY GROUP LTD.	Equity
MS	MORGAN STANLEY	Equity
MSB	Mesabi Trust	Equity
MSCI	MSCI Inc	Equity
MSFT	MICROSOFT CORPORATION	Equity
MSGN	MSG Networks, Inc.	Equity
MSGS	Madison Square Garden Sports Corporation	Equity
MSI	MOTOROLA INC (reverse split)	Equity
MSM	MSC Industrial Direct Co. Inc.	Equity
MT	ARCELORMITTAL	Equity
MTB	M & T BANK CORP	Equity
MTCH	Match Group, Inc.	Equity
MTDR	Matador Resources Company	Equity
MTG	MGIC INVESTMENT CORPORATION	Equity
MTH	MERITAGE HOMES CORPORATION	Equity

Securities List

Und Symbol	Company Name	Inst Type
MTN	Vail Resorts, Inc.	Equity
MTOR	Meritor, Inc.	Equity
MTRX	Matrix Service Company	Equity
MTSI	MACOM Technology Solutions Holdings, Inc.	Equity
MTW	THE MANITOWOC COMPANY, INC.	Equity
MTZ	MASTEC INC	Equity
MU	MICRON TECHNOLOGY INC.	Equity
MUB	iShares S&P National AMT Free Municipal Bond Fund	ETF
MUFG	Mitsubishi UFJ Financial Group, Inc.	Equity
MUR	MURPHY OIL CORPORATION	Equity
MUSA	Murphy USA Inc.	Equity
MUX	McEwen Mining Inc.	Equity
MVIS	Microvision, Inc.	Equity
MVO	MV Oil Trust	Equity
MWA	Mueller Water Products, Inc.	Equity
MX	MagnaChip Semiconductor Corp.	Equity
MXIM	MAXIM INTEGRATED PROD. IN	Equity
MXL	Maxlinear, Inc.	Equity
MYGN	MYRIAD GENETICS INC	Equity
MYL	MYLAN, INC.	Equity
MYOV	Myovant Sciences Ltd	Equity
NAT	Nordic American Tankers Ltd	Equity
NATI	National Instruments Corporation	Equity
NAV	NAVISTAR INTERNATIONAL CORPORATION	Equity
NAVI	NAVIENT CORPORATION	Equity
NBEV	New Age Beverages Corporation	Equity
NBIX	NEUROCRINE BIOSCIENCES	Equity
NBL	NOBLE ENERGY INC	Equity
NBRV	Nabriva Therapeutics plc	Equity
NCLH	NORWEGIAN CRUISE LINE HOLDINGS LTD.	Equity
NCMI	National Cinedia Inc	Equity
NCR	NCR CORP	Equity
NDAQ	Nasdaq OMX Group	Equity
NDLS	NOODLES & COMPANY	Equity
NDSN	Nordson Corporation	Equity
NE	NOBLE CORPORATION PLC	Equity
NEE	NextEra Energy, Inc.	Equity
NEM	NEWMONT MINING CORPORATION	Equity
NEO	NeoGenomics, Inc.	Equity
NEOS	Neos Therapeutics, Inc.	Equity
NEP	NextEra Energy Partners, LP	Equity
NEPT	Neptune Technologies & Bioresources Inc	Equity
NERV	Minerva Neurosciences, Inc.	Equity
NET	Cloudflare, Inc.	Equity
NEWR	New Relic, Inc.	Equity
NEX	NexTier Oilfield Solutions Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
NFG	National Fuel Gas Company	Equity
NFLX	NETFLIX, INC.	Equity
NG	NOVAGOLD RESOURCES INC (dist)	Equity
NGD	NEW GOLD, INC.	Equity
NGG	National Grid PLC	Equity
NGL	NGL ENERGY PARTNERS L.P.	Equity
NGVC	Natural Grocers by Vitamin Cottage, Inc.	Equity
NHC	National HealthCare Corporation	Equity
NHI	National Health Investors Inc.	Equity
NHTC	NATURAL HEALTH TRENDS CORP.	Equity
NI	NISOURCE, INC	Equity
NICE	NICE Ltd.	Equity
NIO	NIO Inc.	Equity
NK	NantKwest, Inc.	Equity
NKE	NIKE INC.	Equity
NKLA	Nikola Corporation	Equity
NKTR	NEKTAR THERAPEUTICS	Equity
NLOK	NortonLifeLock Inc	Equity
NLS	Nautilus Inc.	Equity
NLSN	Nielsen Holdings NV	Equity
NLTX	Neoleukin Therapeutics, Inc. (	Equity
NLY	ANNALY CAPITAL MANAGEMENT, INC.	Equity
NM	Navios Maritime Holdings, Inc.	Equity
NMFC	New Mountain Finance Corporation	Equity
NMIH	NMI Holdings, Inc.	Equity
NMM	Navios Maritime Partners LP	Equity
NMRK	Newmark Group Inc	Equity
NNBR	NN, Inc.	Equity
NNN	National Retail Properties, Inc.	Equity
NOAH	Noah Holdings, Ltd.	Equity
NOC	NORTHROP GRUMMAN CORP	Equity
NOG	Northern Oil and Gas Inc	Equity
NOK	NOKIA CORPORATION	Equity
NOV	NATIONAL OILWELL VARCO, INC.	Equity
NOW	ServiceNow Inc.	Equity
NPO	EnPro Industries Inc	Equity
NPTN	NeoPhotonics Corp.	Equity
NR	Newpark Resources, Inc.	Equity
NRG	NRG ENERGY, INC.	Equity
NRP	Natural Resource Partners L.P.	Equity
NRZ	NEW RESIDENTIAL INVESTMENT CORP.	Equity
NS	NuStar Energy LP	Equity
NSA	National Storage Affiliates	Equity
NSC	NORFOLK SOUTHERN CORPORATION	Equity
NSP	Insperty, Inc.	Equity
NSTG	NanoString Technologies, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
NTAP	NETAPP, INC.	Equity
NTCT	NetScout Systems, Inc.	Equity
NTES	NETEASE, INC.	Equity
NTGR	NETGEAR INC	Equity
NTLA	Intellia Therapeutics Inc.	Equity
NTNX	Nutanix, Inc.	Equity
NTP	Nam Tai Property Inc.	Equity
NTR	Nutrien Ltd.	Equity
NTRP	Neurotrope, Inc.	Equity
NTRS	NORTHERN TRUST CORPORATIO	Equity
NTUS	Natus Medical Incorporated (	Equity
NTWK	NetSol Technologies, Inc.	Equity
NUAN	NUANCE COMMUNICATIONS, INC.	Equity
NUE	NUCOR CORPORATION	Equity
NUGT	DIREXION DAILY GOLD MINERS BULL 3X SHRS	ETF
NUS	NU SKIN ENTERPRISES INC.	Equity
NUVA	NuVasive, Inc.	Equity
NVAX	NOVAVAX, INC	Equity
NVCR	NovoCure Limited	Equity
NVDA	NVIDIA CORPORATION	Equity
NVGS	NAVIGATOR HOLDINGS LTD.	Equity
NVMI	Nova Measuring Instruments Ltd.	Equity
NVO	Novo Nordisk	Equity
NVRO	Nevro Corp.	Equity
NVS	ALCON INC (Merger)	Equity
NVST	Envista Holdings Corp	Equity
NVT	nVent Electric plc	Equity
NVTA	Invitae Corporation	Equity
NWL	NEWELL RUBBERMAID, INC.	Equity
NWPX	Northwest Pipe Company	Equity
NWS	News Corporation	Equity
NWSA	NEWS CORPORATION	Equity
NX	Quanex Building Products Corporation	Equity
NXGN	NextGen Healthcare, Inc.	Equity
NXPI	NXP Semiconductors NV	Equity
NXST	NEXSTAR BROADCASTING GROUP, INC.	Equity
NYCB	NEW YORK COMM. BANCORP	Equity
NYMT	New York Mortgage Trust, Inc.	Equity
NYMX	Nymox Pharmaceutical Corporation	Equity
NYT	NEW YORK TIMES COMPANY	Equity
O	Realty Income Corporation	Equity
OAS	Oasis Petroleum Inc.	Equity
OC	OWENS CORNING INC.	Equity
OCN	OCWEN FINANCIAL CORPORATION	Equity
OCSL	Oaktree Specialty Lending Corporation	Equity
OCUL	Ocular Therapeutix, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
ODFL	Old Dominion Freight Line (150 shares)	Equity
ODP	OFFICE DEPOT, INC.	Equity
OEF	ISHARES S&P 100 ETF	ETF
OFG	OFG BANNCORP	Equity
OFIX	ORTHOFIX INTERNATIONAL N.V.	Equity
OGL	OrganiGram Holdings Inc	Equity
OHI	OMEGA Healthcare Investors, Inc.	Equity
OI	OWENS-ILLINOIS INC.	Equity
OIH	MARKET VECTORS OIL SERVICES ETF	ETF
OII	OCEANEERING INTERNATIONAL, INC	Equity
OIS	Oil States International, Inc.	Equity
OKE	ONEOK, INC.	Equity
OKTA	Okta, Inc.	Equity
OLED	CAMBRIDGE DISPLAY TECHNOLOGY INC.	Equity
OLLI	Ollie's Bargain Outlet Holdings, Inc.	Equity
OLN	OLIN CORP.	Equity
OMC	OMNICOM GROUP	Equity
OMER	Omeros Corporation	Equity
OMEX	Odyssey Marine Exploration Inc.	Equity
OMF	OneMain Holdings, Inc.	Equity
OMI	OWENS & MINOR, INC	Equity
ON	ON Semiconductor Corporation	Equity
ONB	Old National Bancorp	Equity
ONDK	On Deck Capital, Inc.	Equity
ONTO	Onto Innovation Inc.	Equity
ONVO	ORGANOVO HOLDINGS, INC.	Equity
OPI	(New) Office Properties Income Trust	Equity
OPK	OPKO HEALTH, INC.	Equity
OR	Osisko Gold Royalties Ltd	Equity
ORA	Ormat Technologies, Inc.	Equity
ORBC	ORBCOMM, Inc.	Equity
ORC	Orchid Island Capital, Inc.	Equity
ORCL	ORACLE CORPORATION	Equity
ORI	Old Republic International Corporation	Equity
ORLY	O'REILLY AUTOMOTIVE INC.	Equity
ORMP	Oramed Pharmaceuticals Inc.	Equity
OSIS	OSI Systems Inc.	Equity
OSK	Oshkosh Corporation	Equity
OSPN	OneSpan Inc.	Equity
OSTK	Overstock.com, Inc.	Equity
OSUR	ORASURE TECHNOLOGIES INC	Equity
OTEX	OPEN TEXT CORPORATION	Equity
OTIC	Otonomy, Inc.	Equity
OUT	OUTFRONT MEDIA INC.	Equity
OVV	Ovintiv Inc.	Equity
OXM	Oxford Industries, Inc	Equity

Securities List

Und Symbol	Company Name	Inst Type
OXY	OCCIDENTAL PETROLEUM CORPORATION	Equity
OZK	Bank OZK	Equity
PAA	PLAINS ALL AMERICAN PIPELINE, LP	Equity
PAAS	PAN AMERICAN SILVER CORPORATION	Equity
PACB	Pacific Biosciences of California Inc	Equity
PACW	PacWest Bancorp	Equity
PAG	Penske Automotive Group Inc	Equity
PAGP	PLAINS GP HOLDINGS, L.P.	Equity
PAGS	PagSeguro Digital Ltd.	Equity
PAM	Pampa Energía S.A.	Equity
PANW	Palo Alto Networks Inc	Equity
PAYC	Paycom Software, Inc.	Equity
PAYS	PaySign, Inc.	Equity
PAYX	PAYCHEX, INC	Equity
PBA	Pembina Pipeline Corporation	Equity
PBCT	PEOPLES UNITED FINANCIAL BANK, INC.	Equity
PBF	PBF ENERGYINC.	Equity
PBFX	PBF Logistics LP	Equity
PBI	PITNEY BOWES INC.	Equity
PBPB	POTBELLY CORPORATION	Equity
PBR	PETROLEO BRASILEIRO PETROBRAS SA	Equity
PBT	PERMIAN BASIN ROYALTY TRUST	Equity
PBYI	PUMA BIOTECHNOLOGY, INC.	Equity
PCAR	PACCAR INC.	Equity
PCG	PG & E CORP	Equity
PCH	PotlatchDeltic Corporation	Equity
PCOM	Points International Ltd.	Equity
PCRX	Pacira Pharmaceuticals, Inc./DE	Equity
PCTY	Paylocity Holding Corporation	Equity
PCYG	Park City Group Inc.	Equity
PD	PagerDuty, Inc.	Equity
PDCE	PDC Energy Inc.	Equity
PDCO	Patterson Companies, Inc.	Equity
PDD	Pinduoduo Inc.	Equity
PDLI	PDL BioPharma	Equity
PDS	Precision Drilling Corporation	Equity
PE	PARSLEY ENERGY, INC.	Equity
PEAK	Healthpeak Properties, Inc.	Equity
PEG	PUBLIC SERVICE ENT GROUP INC	Equity
PEGA	Pegasystems, Inc.	Equity
PEI	Penn Real Estate Invest Tst	Equity
PEIX	PACIFIC ETHANOL, INC.	Equity
PENN	PENN NATIONAL GAMING INC	Equity
PEP	PEPSICO, INC.	Equity
PER	SandRidge Permian Trust	Equity
PERI	Perion Network Ltd.	Equity

Securities List

Und Symbol	Company Name	Inst Type
PETS	PETMED EXPRESS, INC.	Equity
PFE	PFIZER INC.	Equity
PFF	iShares US Preferred Stock	ETF
PFG	PRINCIPAL FINANCIAL GROUP, INC.	Equity
PFNX	Pfenex Inc	Equity
PFPT	Proofpoint, Inc.	Equity
PFSI	PennyMac Financial Services, Inc.	Equity
PFSW	PFSweb Inc.	Equity
PG	PROCTER & GAMBLE COMPANY	Equity
PGEN	Precigen, Inc.	Equity
PGF	PowerShares Financial Preferred ETF	ETF
PGNY	Progyny Inc	Equity
PGR	PROGRESSIVE CORPORATION	Equity
PGTI	PGT, Inc.	Equity
PH	PARKER-HANNIFIN CORP	Equity
PHG	Koninklijke Philips N.V	Equity
PHM	PULTEGROUP, INC.	Equity
PHX	PANHANDLE OIL AND GAS, INC.	Equity
PI	Impinj, Inc.	Equity
PICO	PICO Holdings Inc.	Equity
PII	POLARIS INDUSTRIES, INC.	Equity
PINC	Premier Inc	Equity
PINS	Pinterest, Inc.	Equity
PIPR	Piper Sandler Companies	Equity
PJT	PJT Partners Inc.	Equity
PKG	PACKAGING CORP OF AMERICA	Equity
PKI	PERKINELMER, INC.	Equity
PKX	POSCO	Equity
PLAB	Photronics Inc.	Equity
PLAN	Anaplan, Inc.	Equity
PLAY	Dave & Buster's Entertainment, Inc.	Equity
PLCE	CHILDREN'S PLACE RETAIL	Equity
PLD	PROLOGIS INC.	Equity
PLNT	Planet Fitness, Inc.	Equity
PLOW	Douglas Dynamics, Inc.	Equity
PLT	Plantronics, Inc.	Equity
PLUG	PLUG POWER INC	Equity
PLX	Protalix BioTherapeutics Inc.	Equity
PM	PHILIP MORRIS INTERNATIONAL, INC.	Equity
PMT	Pennymac Mortgage Investment Trust	Equity
PNC	PNC FINANCIAL SERVICES GROUP INC.	Equity
PNFP	Pinnacle Financial Partners, Inc.	Equity
PNR	Pentair plc	Equity
PNW	Pinnacle West Capital Corporation	Equity
PODD	Insulet Corporation	Equity
POL	Polyone Corporation	Equity

Securities List

Und Symbol	Company Name	Inst Type
POOL	Pool Corporation	Equity
POST	Post Holdings, Inc.	Equity
POWI	Power Integrations Inc	Equity
PPC	PILGRIMS PRIDE CORP	Equity
PPG	PPG INDUSTRIES INC.	Equity
PPL	PPL CORPORATION	Equity
PRAA	PRA GROUP, INC.	Equity
PRAH	PRA Health Sciences, Inc.	Equity
PRDO	Perdoceo Education Corporation	Equity
PRFT	Perficient, Inc.	Equity
PRGO	PERRIGO COMPANY	Equity
PRGS	Progress Software Corporation	Equity
PRI	Primerica, Inc.	Equity
PRIM	Primoris Services Corporation	Equity
PRLB	Proto Labs Inc	Equity
PRMW	Primo Water Corp.	Equity
PRO	Pros Holdings Inc	Equity
PRSP	Perspecta Inc.	Equity
PRTA	PROTHENA CORPORATION PLC	Equity
PRTK	Paratek Pharmaceuticals, Inc.	Equity
PRTY	Party City Holdco Inc.	Equity
PRU	PRUDENTIAL FINANCIAL, INC.	Equity
PRVB	Provention Bio Inc	Equity
PS	Pluralsight, Inc.	Equity
PSA	Public Storage	Equity
PSEC	Prospect Captial Corporation	Equity
PSMT	PriceSmart, Inc.	Equity
PSN	Parsons Corporation	Equity
PSO	Pearson plc	Equity
PSQ	ProShares Short QQQ	ETF
PST	ProShares UltraShort 7-10 Year Treasury	ETF
PSTG	Pure Storage, Inc.	Equity
PSTI	Pluristem Therapeutics Inc	Equity
PSX	PHILLIPS 66	Equity
PSXP	PHILLIPS 66 PARTNERS L.P.	Equity
PTC	PTC Inc.	Equity
PTCT	PTC Therapeutics, Inc.	Equity
PTE	PolarityTE, Inc.	Equity
PTEN	PATTERSON-UTI ENERGY INC.	Equity
PTI	Proteostasis Therapeutics, Inc.	Equity
PTLA	Portola Pharmaceuticals, Inc.	Equity
PTON	Peloton Interactive, Inc.	Equity
PTR	PETROCHINA CO. LTD.	Equity
PUMP	ProPetro Holding Corp.	Equity
PVG	Pretium Resources, Inc.	Equity
PVH	PVH Corp.	Equity

Securities List

Und Symbol	Company Name	Inst Type
PVL	Permianville Royalty Trust	Equity
PWR	QUANTA SERVICES, INC.	Equity
PXD	PIONEER NATURAL RESOURCES COMPANY	Equity
PXLW	PIXELWORKS, INC.	Equity
PYPL	PayPal Holdings, Inc.	Equity
PZZA	Papa John's International, Inc.	Equity
QCOM	QUALCOMM INCORPORATED	Equity
QD	Qudian, Inc.	Equity
QDEL	QUIDEL CORPORATION	Equity
QEP	QEP Resources Inc.	Equity
QID	PROSHARES ULTRASHORT QQQ	ETF
QIWI	QIWI PLC	Equity
QLD	PROSHARES ULTRA QQQ	ETF
QLYS	QUALYS, INC.	Equity
QNST	Quinstreet, Inc.	Equity
QQQ	INVESCO QQQ Trust	ETF
QRTEA	Qurate Retail, Inc.	Equity
QRVO	Qorvo, Inc.	Equity
QSR	Restaurant Brands International Inc.	Equity
QTT	Qutoutiao Inc.	Equity
QTWO	Q2 Holdings, Inc.	Equity
QUAD	Quad/Graphics, Inc.	Equity
QUIK	QuickLogic Corporation	Equity
QUOT	Quotient Technology Inc.	Equity
QURE	uniQure N.V.	Equity
R	RYDER SYSTEMS INC.	Equity
RAD	RITE AID CORPORATION	Equity
RADA	Rada Electronic Industries Ltd	Equity
RAIL	Freight Car America Inc	Equity
RAMP	LiveRamp Holdings, Inc.	Equity
RARE	Ultragenyx Pharmaceutical Inc.	Equity
RBA	Ritchie Bros. Auctioneers Incorporated	Equity
RBS	Royal Bank of Scotland Group PLC	Equity
RCI	Rogers Communication, Inc.	Equity
RCII	RENT-A_CENTER, INC.	Equity
RCL	ROYAL CARIBBEAN CRUISES LTD.	Equity
RCM	R1 RCM Inc	Equity
RDFN	Redfin Corporation	Equity
RDI	Reading International Inc	Equity
RDN	RADIAN GROUP INC.	Equity
RDNT	RadNet, Inc.	Equity
RDSA	ROYAL DUTCH SHELL PLC	Equity
RDSB	ROYAL DUTCH SHELL PLC CL B	Equity
RDUS	Radius Health, Inc.	Equity
RDWR	RADWARE LTD.	Equity
RDY	Dr. Reddy's Laboratories Limited	Equity

Securities List

Und Symbol	Company Name	Inst Type
RE	EVEREST RE GROUP LTD	Equity
REAL	RealReal Inc	Equity
REFR	Research Frontiers Inc.	Equity
REG	REGENCY CENTERS CORP	Equity
REGI	Renewable Energy Group Inc	Equity
REGN	REGENERON PHARMACEUTICALS	Equity
REI	Ring Energy, Inc.	Equity
REM	ISHARES MORTGAGE REAL ESTATE ETF	ETF
REMX	Market Vectors Rare Earth/Strategic Metals ETF	ETF
RENN	Renren, Inc.	Equity
RES	RPC INC	Equity
RESN	Resonant Inc.	Equity
RETA	Reata Pharmaceuticals Inc	Equity
REV	Revlon, Inc.	Equity
REZI	Resideo Technologies Inc	Equity
RF	REGIONS FINANCIAL CORPORATION	Equity
RFP	Resolute Forest Products Inc.	Equity
RGEN	Repligen Corporation	Equity
RGLD	ROYAL GOLD, INC.	Equity
RGLS	REGULUS THERAPEUTICS INC.	Equity
RGNX	REGENXBIO Inc.	Equity
RGP	Resources Connection, Inc.	Equity
RGR	STURM, RUGER & COMPANY INC.	Equity
RH	RESTORATION HARDWARE HOLDINGS, INC	Equity
RHI	ROBERT HALF INTERNATIONAL	Equity
RHP	Ryman Hospitality Properties, Inc.(Stk Div)	Equity
RICK	RCI HOSPITALITY HOLDINGS, INC.	Equity
RIG	TRANSOCEAN LTD.	Equity
RIGL	Rigel Pharmaceuticals, Inc.	Equity
RIO	RIO TINTO PLC	Equity
RIOT	Riot Blockchain, Inc.	Equity
RJF	RAYMOND JAMES FINANCIAL INC	Equity
RL	RALPH LAUREN CORPORATION	Equity
RLGY	Realogy Holdings Corp.	Equity
RLJ	RLJ Lodging Trust	Equity
RM	REGIONAL MANAGEMENT CORP.	Equity
RMBS	RAMBUS INC	Equity
RMD	RESMED, INC.	Equity
RMTI	Rockwell Medical, Inc.	Equity
RNG	RINGCENTRAL, INC.	Equity
RNR	RENAISSANCERE HOLDINGS LTD.	Equity
RNWK	RealNetworks, Inc.	Equity
ROG	ROGERS CORPORATION	Equity
ROIC	Retail Opportunity Investments Corp.	Equity
ROK	ROCKWELL AUTOMATION	Equity
ROKU	Roku, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
ROL	Rollins, Inc.	Equity
ROM	ProShares Ultra Technology	ETF
ROP	Roper Technologies, Inc.	Equity
ROST	ROSS STORES INC.	Equity
ROYT	Pacific Coast Oil Trust	Equity
RP	RealPage, Inc.	Equity
RPD	Rapid7, Inc.	Equity
RPM	RPM INTERNATIONAL, INC	Equity
RRC	RANGE RESOURCES CORPORATION	Equity
RRD	R.R. DONNELLEY & SONS COMPANY	Equity
RRGB	Red Robin Gourmet Burgers, Inc.	Equity
RRR	Red Rock Resorts, Inc.	Equity
RS	RELIANCE STEEL & ALUMINUM CO.	Equity
RSG	REPUBLIC SERVICES	Equity
RSP	Invesco S&P 500 Equal Weight ETF	ETF
RST	Rosetta Stone Inc	Equity
RSX	MARKET VECTORS RUSSIA ETF	ETF
RTH	Market Vectors Retail ETF	ETF
RTRX	Retrophin, Inc.	Equity
RTX	Raytheon Technologies Corporation	Equity
RUBI	THE RUBICON PROJECT, INC.	Equity
RUN	Sunrun Inc.	Equity
RUSHA	Rush Enterprises Inc	Equity
RUSL	Direxion Daily Russia Bull 3x Shares	ETF
RUTH	Ruth's Hospitality Group Inc.	Equity
RVLV	Revolve Group, Inc.	Equity
RVNC	Revance Therapeutics, Inc.	Equity
RWM	ProShares Short Russell2000	ETF
RWR	SPDR Dow Jones REIT ETF	ETF
RWT	REDWOOD TRUST, INC.	Equity
RXN	Rexnord Corporation	Equity
RY	ROYAL BANK OF CANADA	Equity
RYAAY	Ryanair Holdings plc	Equity
RYAM	RAYONIER ADVANCED MATERIALS INC.	Equity
RYI	Ryerson Holding Corporation	Equity
RYN	Rayonier Inc.	Equity
SA	SEABRIDGE GOLD INC	Equity
SABR	SABRE CORPORATION	Equity
SAFM	SANDERSON FARMS IN	Equity
SAFT	Safety Insurance Group Inc.	Equity
SAGE	Sage Therapeutics, Inc.	Equity
SAIC	Science Applications International Corporation	Equity
SAIL	SailPoint Technologies Holdings, Inc.	Equity
SAM	Boston Beer Company, Inc.	Equity
SAND	Sandstorm Gold Ltd.	Equity
SANM	Sanmina Corporation	Equity

Securities List

Und Symbol	Company Name	Inst Type
SANW	S&W SEED COMPANY	Equity
SAP	SAP AG	Equity
SAVA	Cassava Sciences Inc	Equity
SAVE	SPIRIT AIRLINES, INC.	Equity
SB	Safe Bulkers Inc.	Equity
SBAC	SBA COMMUNICATION CORP	Equity
SBGI	SINCLAIR BROADCASTING GRP	Equity
SBH	Sally Beauty Holdings Inc	Equity
SBLK	Star Bulk Carriers Corporation	Equity
SBNY	Signature Bank	Equity
SBRA	Sabra Health Care REIT, Inc.	Equity
SBS	Companhia de Saneamento Basico do Estado de Sao Paulo	Equity
SBSW	Sibanye-Stillwater	Equity
SBUX	STARBUCKS CORPORATION	Equity
SC	SANTANDER CONSUMER USA HOLDINGS INC.	Equity
SCCO	SOUTHERN COPPER CORPORATION	Equity
SCHL	Scholastic Corporation	Equity
SCHN	SCHNITZER STEEL INDUSTRIES, INC	Equity
SCHW	THE CHARLES SCHWAB CORPORATION	Equity
SCI	SERVICE CORPORATION INTERNATIONAL	Equity
SCO	ProShare UltraShort DJ UBS Crude Oil	ETF
SCOR	Comscore Inc	Equity
SCS	STEELCASE, INC. CLASS A	Equity
SCU	Sculptor Capital Management, Inc	Equity
SCVL	Shoe Carnival Inc	Equity
SDC	SmileDirectClub, Inc.	Equity
SDOW	ProShares UltraPro Short Dow30	ETF
SDS	PROSHARES ULTRASHORT S&P500	ETF
SDY	SPDR S&P Dividend ETF	ETF
SE	Sea Limited	Equity
SEAC	SeaChange International, Inc.	Equity
SEAS	SEAWORLD ENTERTAINMENT, INC.	Equity
SEDG	SolarEdge Technologies, Inc.	Equity
SEE	SEALED AIR CORP	Equity
SEIC	SEI INVESTMENTS CO	Equity
SEM	Select Medical Holdings Corporation	Equity
SENS	Senseonics Holdings Inc.	Equity
SERV	ServiceMaster Global Holdings, Inc.	Equity
SESN	Sesen Bio, Inc.	Equity
SF	Stifel Financial Corp.	Equity
SFIX	Stitch Fix, Inc.	Equity
SFL	SHIP FINANCE INTERNATIONAL LIMITED	Equity
SFM	SPROUTS FARMERS MARKET, INC.	Equity
SGEN	Seattle Genetics, Inc.	Equity
SGH	SMART Global Holdings, Inc.	Equity
SGMO	Sangamo Therapeutics, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
SGMS	SCIENTIFIC GAMES CORPORATION	Equity
SH	ProShares Short S&P 500	ETF
SHAK	Shake Shack Inc.	Equity
SHLX	SHELL MIDSTREAM PARTNERS, L.P.	Equity
SHO	Sunstone Hotel Investors, Inc.	Equity
SHOO	STEVEN MADDEN, LTD.	Equity
SHOP	Shopify Inc.	Equity
SHW	THE SHERWIN-WILLIAMS COMPANY	Equity
SHY	Ishares Barclays 1-3 Year Treasury Bond	ETF
SID	COMPANHIA SIDERURGICAL NACIONAL ADR	Equity
SIEN	Sientra, Inc.	Equity
SIG	SIGNET JEWELERS LIMITEDSHS	Equity
SIL	Global X Silver Miners ETF	ETF
SILJ	ETFMG Prime Junior Silver ETF	ETF
SIMO	Silicon Motion Technology Corp.	Equity
SINA	SINA CORPORATION	Equity
SIRI	SIRIUS XM RADIO INC.	Equity
SITC	SITE Centers Corporation	Equity
SIVB	SVB Financial Group	Equity
SIVR	ETFS Physical Silver	ETF
SIX	Six Flags Entertainment Corporation	Equity
SJM	J M SMUCKER COMPANY (THE)	Equity
SJNK	SPDR Barclays Short Term High Yield Bond ETF	ETF
SJT	San Juan Basin Royalty Trust	Equity
SKF	ProShares UltraShort Financials	ETF
SKT	Tanger Factory Outlet Centers, Inc.	Equity
SKX	SKETCHERS USA INCORPORATED	Equity
SKY	Skyline Champion Corporation	Equity
SKYW	SkyWest Inc.	Equity
SLAB	SILICON LABORATORIES INC.	Equity
SLB	SCHLUMBERGER LIMITED	Equity
SLCA	US Silica Holdings Inc.	Equity
SLDB	Solid Biosciences Inc	Equity
SLG	SL Green Realty Corp.	Equity
SLGN	Silgan Holdings Inc.	Equity
SLM	SLM CORP	Equity
SLV	ISHARES SILVER TRUST	ETF
SLX	VanEck Vectors Steel ETF	ETF
SM	SM Energy Company	Equity
SMAR	Smartsheet Inc.	Equity
SMFG	SUMITOMO MITSUI FINANCIAL GROUP, INC.	Equity
SMG	The Scotts Miracle-Gro Company	Equity
SMH	MARKET VECTORS SEMICONDUCTOR ETF	ETF
SMLP	Summit Midstream Partners	Equity
SMPL	Simply Good Foods Co	Equity
SMSI	Smith Micro Software, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
SMTC	SEMTECH CORPORATION	Equity
SNA	SNAP-ON INCORPORATED	Equity
SNAP	Snap, Inc	Equity
SNBR	Sleep Number Corporation	Equity
SNCR	Synchronoss Technologies, Inc.	Equity
SND	Smart Sand, Inc.	Equity
SNE	SONY CORPORATION	Equity
SNN	SMITH & NEPHEW PLC	Equity
SNP	CHINA PETROLEUM AND CHEMICAL CORP	Equity
SNPS	Synopsys Inc.	Equity
SNR	New Senior Investment Group Inc.	Equity
SNSS	Sunesis Pharmaceuticals Inc.	Equity
SNV	SYNOVUS FINANCIAL CORPORATION	Equity
SNX	Synnex Corporation	Equity
SNY	Sanofi	Equity
SO	SOUTHERN COMPANY	Equity
SOCL	GLOBAL X SOCIAL MEDIA INDEX ETF	ETF
SOGO	Sogou Inc.	Equity
SOHU	SOHU.COM INC.	Equity
SOL	ReneSola Ltd (ADS)	Equity
SON	Sonoco Products Co.	Equity
SONO	Sonos, Inc.	Equity
SOXL	DIREXION DAILY SEMICONDUCTOR BULL 3X ETF	ETF
SOXS	Direxion Daily Semiconductor Bear 3X ETF	ETF
SOXX	iShares PHLX Semiconductor Index Fund	ETF
SOYB	Teucrium Soybean ETF	ETF
SPB	Spectrum Brands Holdings Inc.	Equity
SPCE	Virgin Galactic Holdings, Inc.	Equity
SPG	SIMON PROPERTY GROUP INC.	Equity
SPGI	S&P Global Inc.	Equity
SPH	Suburban Propane Partners, L.P.	Equity
SPLK	SPLUNK, INC.	Equity
SPLV	PowerShares S&P 500 Low Volatility ETF	ETF
SPOT	Spotify Technology S.A.	Equity
SPPI	SPECTRUM PHARMACEUTICALS, INC.	Equity
SPR	Spirit Aerosystems Holdings Inc	Equity
SPTM	SPDR Portfolio Total Stock Market ETF	ETF
SPWH	Sportsman's Warehouse Holdings, Inc.	Equity
SPWR	SUNPOWER CORPORATION	Equity
SPXC	SPX Corporation	Equity
SPXL	Direxion Daily S&P 500 Bull 3X Shares	ETF
SPXS	Direxion Daily S&P 500 Bear 3X Shares (1:5 reverse	ETF
SPXU	PROSHARES ULTRAPRO SHORT S&P500	ETF
SPY	SPDR S&P 500 TRUST	ETF
SQ	Square, Inc.	Equity
SQM	CHEMICAL & MINING CO. OF CHILE INC.	Equity

Securities List

Und Symbol	Company Name	Inst Type
SQQQ	PROSHARES ULTRAPRO SHORT QQQ	ETF
SRC	Spirit Realty Capital, Inc.	Equity
SRCL	STERICYCLE, INC.	Equity
SRDX	Surmodics, Inc.	Equity
SRE	SEMPRA ENERGY	Equity
SREV	ServiceSource International, Inc.	Equity
SRG	Seritage Growth Properties	Equity
SRI	Stoneridge, Inc.	Equity
SRNE	Sorrento Therapeutics, Inc.	Equity
SRPT	SAREPTA THERAPEUTICS, INC.	Equity
SRS	ProShares UltraShort Real Estate	ETF
SRTY	ProShares UltraPro Short Russell2000	ETF
SSNC	SS&C Technologies Holdings, Inc.	Equity
SSO	PROSHARES ULTRA S&P500	ETF
SSP	The E.W. Scripps Company	Equity
SSRM	SSR Mining Inc.	Equity
SSSS	Sutter Rock Capital Corporation	Equity
SSTK	SHUTTERSTOCK, INC.	Equity
SSYS	STRATASYS INC.	Equity
ST	Sensata Technologies Holding	Equity
STAA	STAAR SURGICAL COMPANY	Equity
STAG	STAG Industrial, Inc.	Equity
STAR	ISTAR FINANCIAL INC.	Equity
STAY	EXTENDED STAY AMERICA, INC.	Equity
STE	STERIS Corp.	Equity
STKL	SunOpta Inc.	Equity
STLD	STEEL DYNAMICS INC	Equity
STM	STMicroelectronics NV	Equity
STMP	STAMPS.COM, INC	Equity
STNE	StoneCo Ltd.	Equity
STNG	SCORPIO TANKERS, INC.	Equity
STON	Stonemor Partners LP	Equity
STOR	STORE Capital Corporation	Equity
STRA	STRAYER EDUCATION, INC.	Equity
STRL	Sterling Construction Company Inc.	Equity
STT	STATE STREET CORPORATION	Equity
STWD	Starwood Property Trust, Inc.	Equity
STX	SEAGATE TECHNOLOGY PUBLIC LIMITED COMPANY	Equity
STZ	CONSTELLATION BRANDS INC.	Equity
SU	SUNCOR ENERGY INC.	Equity
SUI	Sun Communities, Inc.	Equity
SUM	Summit Materials, Inc.	Equity
SUN	SUNOCO L.P.	Equity
SUP	SUPERIOR INDUSTRIES INTERNATIONAL, INC.	Equity
SUPN	SUPERNUS PHARMACEUTICALS, INC.	Equity
SVC	Service Properties Trust	Equity

Securities List

Und Symbol	Company Name	Inst Type
SVMK	SVMK Inc.	Equity
SVRA	Savara Inc.	Equity
SVXY	ProShares Short VIX Short-Term Futures	ETF
SWBI	Smith & Wesson Brands, Inc. (SWBI)	Equity
SWCH	Switch, Inc.	Equity
SWIR	SIERRA WIRELESS, INC	Equity
SWK	Stanley Black & Decker	Equity
SWKS	SKYWORKS SOLUTIONS INC.	Equity
SWN	SOUTHWESTERN ENERGY COMPANY	Equity
SXC	SunCoke Energy, Inc.	Equity
SYF	SYNCHRONY FINANCIAL	Equity
SYK	STRYKER CORP	Equity
SYNA	SYNAPTICS, INC.	Equity
SYNC	Synacor, Inc.	Equity
SYNH	Syneos Health, Inc.	Equity
SYU	SYSCO CORPORATION	Equity
T	AT&T, INC.	Equity
TA	TravelCenters of America LLC	Equity
TACO	Del Taco Restaurants, Inc.	Equity
TAK	Takeda Pharmaceutical Company Limited	Equity
TAL	TAL International Group Inc	Equity
TAN	Guggenheim Solar ETF	ETF
TAP	Molson Coors Brewing Co.	Equity
TBF	ProShares Short 20+ Year Treasury	ETF
TBPH	Theravance Biopharma, Inc.	Equity
TBT	PROSHARES ULTRASHORT 20+ YEAR TREASURY	ETF
TCBI	Texas Capital Bancshares, Inc.	Equity
TCOM	Trip.com Group Limited	Equity
TCP	TC Pipelines, LP	Equity
TCRD	THL Credit, Inc.	Equity
TCS	THE CONTAINER STORE GROUP, INC.	Equity
TCX	TUCOWS, INC	Equity
TD	TORONTO DOMINION BANK	Equity
TDC	Teradata Corp.	Equity
TDG	TransDigm Group, Inc.	Equity
TDOC	Teladoc, Inc.	Equity
TDS	TELEPHONE & DATA SYSTEMS INC.	Equity
TEAM	Atlassian Corporation Plc	Equity
TECK	Teck Resources Limited	Equity
TECL	Direxion Daily Technology Bull 3X ETF	ETF
TECS	Direxion Daily Technology Bear 3X ETF	ETF
TEL	TE Connectivity Ltd.	Equity
TELL	Tellurian Inc.	Equity
TEN	TENNECO INC	Equity
TEO	Telecom Argentina S.A.	Equity
TER	TERADYNE,INC	Equity

Securities List

Und Symbol	Company Name	Inst Type
TERP	TERRAFORM POWER, INC.	Equity
TEUM	Pareteum Corporation	Equity
TEVA	TEVA PHARMACEUTICAL INDUSTRIES LIMITED	Equity
TEX	TEREX CORPORATION	Equity
TFC	Truist Financial Corporation	Equity
TFSL	TFS Financial Corporation	Equity
TGH	Textainer Group Holdings Limited	Equity
TGI	Triumph Group, Inc.	Equity
TGNA	TEGNA, Inc.	Equity
TGP	Teekay LNG Partners LP	Equity
TGT	TARGET CORPORATION	Equity
TGTX	TG THERAPEUTICS, INC.	Equity
THC	TENET HEALTHCARE CORP (25 shrs)	Equity
THO	THOR INDUSTRIES INC	Equity
THR	Thermon Group Holdings Inc	Equity
THRM	Gentherm Inc	Equity
THS	Treehouse Foods, Inc.	Equity
TIP	iShares Barclays TIPS Bond Fund	ETF
TITN	Titan Machinery, Inc.	Equity
TJX	THE TJX COMPANIES, INC.	Equity
TK	Teekay Corp	Equity
TKC	Turkcell Iletisim Hizmetleri AS	Equity
TKR	TIMKEN COMPANY	Equity
TLRD	Tailored Brands, Inc.	Equity
TLRY	Tilray, Inc.	Equity
TLT	ISHARES 20+ YEAR TREASURY BOND ETF	ETF
TLYS	Tilly's Inc.	Equity
TM	TOYOTA MOTOR CORP	Equity
TME	Tencent Music Entertainment Group	Equity
TMF	DIREXION DAILY 20+ YR TRSY BULL 3X ETF	ETF
TMHC	Taylor Morrison Home Corp	Equity
TMO	Thermo Fisher Scientific Inc.	Equity
TMST	TimkenSteel Corporation	Equity
TMUS	T-MOBILE US, INC.	Equity
TMV	Direxion Daily 20 Year Treasury Bear 3X Shares	ETF
TNA	DIREXION DAILY SMALL CAP BULL 3X SHARES	ETF
TNDM	Tandem Diabetes Care, Inc.	Equity
TNET	TRINET GROUP, INC.	Equity
TNK	Teekay Tankers Ltd	Equity
TNP	TSAKOS ENERGY NAVIGATION LTD	Equity
TOL	TOLL BROTHERS INC.	Equity
TOT	TOTAL SA	Equity
TOUR	TUNIUI CORPORATION	Equity
TOWN	TowneBank	Equity
TPC	Tutor Perini Corporation	Equity
TPCO	Tribune Publishing Company	Equity

Securities List

Und Symbol	Company Name	Inst Type
TPH	TRI POINTE HOMES, INC.	Equity
TPR	Tapestry, Inc.	Equity
TPX	TEMPUR-PEDIC INTERNATIONAL INC.	Equity
TQQQ	ProShares Ultra Pro QQQ	ETF
TREE	LendingTree, Inc.	Equity
TREX	Trex Co. Inc.	Equity
TRGP	Targa Resources Corp.	Equity
TRHC	Tabula Rasa HealthCare Inc	Equity
TRI	Thomson Reuters Corporation	Equity
TRIL	Trillium Therapeutics Inc	Equity
TRIP	TRIPADVISOR INC.	Equity
TRMB	TRIMBLE NAVIGATION LIMITED	Equity
TRMK	Trustmark Corporation	Equity
TRN	TRINITY INDUSTRIES INC.	Equity
TROW	T. ROWE PRICE GROUP INC.	Equity
TROX	Tronox Ltd.	Equity
TRP	TransCanada Corp.	Equity
TRQ	Turquoise Hill Resources Ltd.	Equity
TRTN	Triton International Ltd	Equity
TRU	TransUnion	Equity
TRUE	TRUECAR, INC.	Equity
TRUP	Trupanion, Inc.	Equity
TRV	THE TRAVELERS COMPANIES, INC.	Equity
TRVG	trivago N.V.	Equity
TRVN	Trevena, Inc.	Equity
TRX	Tanzanian Royalty Exploration	Equity
TRXC	TransEnterix, Inc.	Equity
TS	TENARIS SA	Equity
TSCO	TRACTOR SUPPLY COMPANY	Equity
TSE	Trinseo S.A.	Equity
TSEM	TOWER SEMICONDUCTOR LTD.	Equity
TSLA	TESLA MOTORS, INC.	Equity
TSM	TAIWAN SEMICONDUCTOR MFG. CO.	Equity
TSN	TYSON FOODS, INC.	Equity
TSU	Tim Participacoes SA	Equity
TT	Trane Technologies plc	Equity
TTC	THE TORO COMPANY	Equity
TTD	The Trade Desk, Inc.	Equity
TTEK	Tetra Tech, Inc.	Equity
TTM	Tata Motors Ltd.	Equity
TTMI	TTM Technologies, Inc.	Equity
TTNP	Titan Pharmaceuticals Inc.	Equity
TTOO	T2 Biosystems, Inc.	Equity
TTWO	TAKE-TWO INTERACTIVE	Equity
TU	Telus Corporation	Equity
TUFN	Tufin Software Technologies Ltd	Equity

Securities List

Und Symbol	Company Name	Inst Type
TUP	Tupperware Brands Corp	Equity
TUR	ISHARES MSCI TURKEY	ETF
TV	GRUPO TELEVISA, S.A.B.	Equity
TVTY	Tivity Health, Inc.	Equity
TW	Tradeweb Markets Inc.	Equity
TWI	Titan International, Inc.	Equity
TWLO	Twilio, Inc.	Equity
TWM	Proshares UltrShort Russell 2000(reverse split)	Equity
TWNK	Hostess Brands, Inc.	Equity
TWO	Two Harbors Investment Corporation	Equity
TWOU	2U, Inc.	Equity
TWTR	TWITTER INC.	Equity
TX	Ternium S.A.	Equity
TXG	10X Genomics Inc	Equity
TXMD	THERAPEUTICSMD, INC	Equity
TXN	TEXAS INSTRUMENTS INC.	Equity
TXRH	Texas Roadhouse, Inc.	Equity
TXT	TEXTRON INC.	Equity
TYL	Tyler Technologies, Inc.	Equity
TZA	DIREXION DAILY SMALL CAP BEAR 3X SHARES	ETF
UA	UNDER ARMOUR, INC.	Equity
UAA	Under Armour, Inc.	Equity
UAL	UNITED CONTINENTAL HOLDINGS, INC.	Equity
UAN	CVR Partners LP	Equity
UBER	Uber Technologies, Inc.	Equity
UBS	UBS Group Ag	Equity
UCO	PROSHARES ULTRA DJ-UBS CRUDE OIL	ETF
UCTT	Ultra Clean Holdings, Inc.	Equity
UDN	PowerShares DB US Dollar Index Bearish Fund	ETF
UDOW	ProShares UltraPro Dow30	ETF
UDR	UDR, Inc.	Equity
UEC	Uranium Energy Corp	Equity
UEIC	UNIVERSAL ELECTRONICS, INC.	Equity
UEPS	NET 1 UEPS TECHNOLOGIES	Equity
UFPI	Universal Forest Products, Inc.	Equity
UFS	Domtar, Corp.	Equity
UGA	United States Gasoline	ETF
UGI	UGI Corporation	Equity
UGL	ProShares Ultra Gold	ETF
UHS	UNIVERSAL HEALTH SERVICES INC	Equity
UI	Ubiquiti Inc.	Equity
UIHC	UNITED INSURANCE HOLDINGS CORPORATION	Equity
UIS	UNISYS CORPORATION	Equity
UL	Unilever PLC	Equity
ULTA	ULTA SALON COSMETICS & FRAGRANCE INC	Equity
UN	UNILEVER NV	Equity

Securities List

Und Symbol	Company Name	Inst Type
UNFI	UNITED NATURAL FOODS, INC.	Equity
UNG	UNITED STATES NATURAL GAS	ETF
UNH	UNITEDHEALTH GROUP INCORPORATED	Equity
UNIT	Uniti Group Inc.	Equity
UNM	Unum Group	Equity
UNP	UNION PACIFIC CORPORATION	Equity
UNVR	Univar Inc.	Equity
UPLD	Upland Software, Inc.	Equity
UPRO	ProShares Ultrapro S&P 500	ETF
UPS	UNITED PARCEL SERVICE, INC.	Equity
UPWK	Upwork Inc.	Equity
URA	Global X Uranium ETF	ETF
URBN	URBAN OUTFITTERS INC	Equity
URE	ProShares Ultra Real Estate	ETF
URI	UNITED RENTALS, INC.	Equity
URTY	ProShares UltraPro Russell2000	ETF
USAC	USA COMPRESSION PARTNERS, L.P.	Equity
USB	U.S. BANCORP	Equity
USCR	U.S. Concrete, Inc.	Equity
USD	ProShares Ultra Semiconductors	ETF
USFD	US Foods Holding Corp.	Equity
USMV	iShares MSCI USA Minimum Volatility	ETF
USNA	USANA Health Sciences, Inc.	Equity
USO	UNITED STATES OIL FUND	ETF
USX	US Xpress Enterprises Inc	Equity
UTHR	UNITED THERAPEUTICS CORP	Equity
UUP	POWERSHARES DB US DOLLAR INDEX BULLISH	ETF
UUUU	Energy Fuels Inc.	Equity
UVE	UNIVERSAL INSURANCE HOLDINGS, INC.	Equity
UVV	UNIVERSAL CORPORATION	Equity
UVXY	PROSHARES ULTRA VIX SHORT-TERM FUT ETF	ETF
UWM	ProShares Ultra Russell2000	ETF
UXIN	Uxin Limited	Equity
UYG	ProShares Ultra Financials	ETF
V	VISA INC.	Equity
VAC	Marriott Vacations Worldwide Corp.	Equity
VAL	Valaris plc	Equity
VALE	VALE S.A.	Equity
VAR	VARIAN MEDICAL SYSTEMS, INC.	Equity
VBLT	Vascular Biogenics Ltd.	Equity
VBR	Vanguard Small-Cap Value ETF	ETF
VBTX	Veritex Holdings Inc	Equity
VC	Visteon Corp.	Equity
VCEL	Vericel Corporation	Equity
VCRA	Vocera Communications, Inc.	Equity
VCYT	Veracyte, Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
VDE	Vanguard Energy ETF	ETF
VEA	Vanguard FTSE Developed Markets ETF	ETF
VEC	Vectrus, Inc.	Equity
VECO	VEECO INSTRUMENTS	Equity
VEDL	Vedanta Limited	Equity
VEEV	VEEVA SYSTEMS INC.	Equity
VEON	VEON Ltd.	Equity
VER	VEREIT, Inc.	Equity
VERU	Veru Inc	Equity
VET	Vermilion Energy Inc	Equity
VFC	VF CORPORATION	Equity
VFF	Village Farms International, Inc.	Equity
VFH	Vanguard Financials ETF	ETF
VG	Vonage Holdings Corporation	Equity
VGK	Vanguard FTSE Europe ETF	ETF
VGR	VECTOR GROUP LTD.	Equity
VHC	VIRNETX HOLDING CORP	Equity
VIAC	ViacomCBS Inc.	Equity
VIAV	Viavi Solutions Inc.	Equity
VICI	VICI Properties Inc.	Equity
VICR	Vicor Corporation	Equity
VIG	Vanguard Dividend Appreciation ETF	ETF
VIPS	VIPSHOP HOLDINGS LIMITED	Equity
VIR	Vir Biotechnology, Inc.	Equity
VIRT	Virtu Financial, Inc.	Equity
VIV	Telefonica Brasil S.A.	Equity
VIVO	Meridian Bioscience Inc.	Equity
VIXM	ProShares VIX Mid-Term Futures	ETF
VIXY	ProShares VIX Short-Term Futures ETF	ETF
VJET	VOXELJET AG	Equity
VKTX	Viking Therapeutics, Inc.	Equity
VLO	VALERO ENERGY CORPORATION	Equity
VLRS	Controladora Vuela Compania de	Equity
VLV	VALLEY NATIONAL BANCORP	Equity
VMC	VULCAN MATERIALS COMPANY	Equity
VMI	Valmont Industries, Inc.	Equity
VMW	VMWARE, INC.	Equity
VNDA	Vanda Pharmaceuticals, Inc.	Equity
VNET	21Vianet Group Inc	Equity
VNO	VORNADO REALTY TRUST	Equity
VNOM	Viper Energy Partners LP	Equity
VNQ	Vanguard REIT ETF	ETF
VNTR	Venator Materials PLC	Equity
VOC	Voc Energy Trust	Equity
VOD	VODAFONE GROUP PUBLIC LIMITED COMPANY	Equity
VOE	Vanguard Mid-Cap Value ETF	ETF

Securities List

Und Symbol	Company Name	Inst Type
VOO	Vanguard S&P 500 ETF	ETF
VOXX	VOXX International Corporation	Equity
VOYA	VOYA FINANCIAL INC.	Equity
VRA	Vera Bradley, Inc.	Equity
VRAY	ViewRay, Inc.	Equity
VREX	Varex Imaging Corporation	Equity
VRNS	Varonis Systems, Inc.	Equity
VRNT	Verint Systems, Inc.	Equity
VRSK	Verisk Analytics, Inc.	Equity
VRSN	VERISIGN, INC.	Equity
VRTX	VERTEX PHARMACEUTICALS INCORPORATED	Equity
VSAT	ViaSat, Inc.	Equity
VSH	VISHAY INTERTECHNOLOGY	Equity
VSLR	VIVINT SOLAR, INC.	Equity
VST	Vistra Energy Corp.	Equity
VSTM	Verastem, Inc.	Equity
VSTO	Vista Outdoor Inc.	Equity
VT	Vanguard Total World Stock ETF	ETF
VTI	Vanguard Total Stock Market ETF	ETF
VTNR	VERTEX ENERGY, INC.	Equity
VTR	Ventas, Inc.	Equity
VUZI	Vuzix Corporation	Equity
VVUS	VIVUS INC.	Equity
VVV	Valvoline Inc.	Equity
VWO	Vanguard MSCI Emerging Markets ETF	ETF
VXUS	Vanguard Total International Stock ETF	ETF
VXX	iPath Series B S&P 500 VIX Short-Term Futures ETN	ETF
VXZ	iPath Series B S&P 500 VIX Mid-Term Futures ETN	ETF
VYGR	Voyager Therapeutics, Inc.	Equity
VYM	Vanguard High Dividend Yield ETF	ETF
VZ	VERIZON COMMUNICATIONS INC.	Equity
W	Wayfair Inc.	Equity
WAB	Westinghouse Air Brake Technologies Corporation	Equity
WAL	Western Alliance Bancorp	Equity
WAT	WATERS CORPORATION	Equity
WATT	Energous Corporation	Equity
WB	WEIBO CORP. (ADR)	Equity
WBA	Walgreens Boots Alliance, Inc.,	Equity
WBAI	500.COM LIMITED	Equity
WBT	Welbilt, Inc.	Equity
WCC	WESCO INTERNATIONAL	Equity
WCN	Waste Connections Inc.	Equity
WD	Walker & Dunlop, Inc.	Equity
WDAY	Workday, Inc.	Equity
WDC	WESTERN DIGITAL CORPORATION	Equity
WDFC	WD-40 Company	Equity

Securities List

Und Symbol	Company Name	Inst Type
WDR	WADDELL & REED FINANCIAL	Equity
WEAT	Teucrium Wheat ETF	ETF
WEC	WISCONSIN ENERGY CORP.	Equity
WELL	Welltower Inc.	Equity
WEN	The Wendy's Company	Equity
WERN	WERNER ENTERPRISES INC.	Equity
WES	Western Midstream Partners L.P.	Equity
WETF	WisdomTree Investments, Inc	Equity
WEX	WEX Inc.	Equity
WFC	WELLS FARGO & COMPANY	Equity
WGO	WINNEBAGO INDUSTRIES, INC	Equity
WH	Wyndham Hotels & Resorts, Inc.	Equity
WHR	WHIRLPOOL CORPORATION	Equity
WIFI	Boingo Wireless, Inc.	Equity
WING	Wingstop Inc.	Equity
WIT	WIPRO LTD.	Equity
WIX	WIX.COM LTD.	Equity
WK	Workiva Inc.	Equity
WLK	Westlake Chemical Corp	Equity
WLKP	Westlake Chemical Partners LP	Equity
WLL	WHITING PETROLEUM CORPORATION	Equity
WM	WASTE MANAGEMENT, INC.	Equity
WMB	WILLIAMS COMPANIES, INC.	Equity
WMC	Western Asset Mortgage Capital Corporation	Equity
WMGI	Wright Medical Group N.V.	Equity
WMS	Advanced Drainage Systems, Inc.	Equity
WMT	WAL-MART INC.	Equity
WNC	WABASH NATIONAL CORP.	Equity
WOR	WORTHINGTON INDUSTRIES,INC.	Equity
WORK	Slack Technologies, Inc.	Equity
WPC	W.P. Carey Inc.	Equity
WPG	WASHINGTON PRIME GROUP INC.	Equity
WPM	Wheaton Precious Metals Corporation	Equity
WPP	WPP plc	Equity
WPRT	WESTPORT INNOVATIONS INC.	Equity
WPX	WPX Energy Inc.	Equity
WRK	WestRock Company	Equity
WRLD	WORLD ACCEPTANCE CORPORATION	Equity
WSBF	Waterstone Financial, Inc.	Equity
WSM	WILLIAMS-SONOMA INC	Equity
WSR	Whitestone REIT	Equity
WTFC	Wintrust Financial Corporation	Equity
WTI	W&T OFFSHORE INC	Equity
WTRG	Essential Utilities, Inc.	Equity
WTTR	Select Energy Services, Inc.	Equity
WU	THE WESTERN UNION COMPANY	Equity

Securities List

Und Symbol	Company Name	Inst Type
WVE	WAVE Life Sciences Ltd	Equity
WW	Weight Watchers International, Inc.	Equity
WWE	World Wrestling Entertainment Inc	Equity
WWW	WOLVERINE WORLD WIDE INC	Equity
WY	WEYERHAEUSER COMPANY	Equity
WYND	Wyndham Destinations, Inc.	Equity
WYNN	WYNN RESORTS LTD.	Equity
X	UNITED STATES STEEL CORPORATION	Equity
XAN	Exantas Capital Corporation	Equity
XBI	SPDR S&P Biotech ETF	ETF
XBIT	XBiotech, Inc.	Equity
XEC	CIMAREX ENERGY CO.	Equity
XEL	XCEL ENERGY INC	Equity
XENT	Intersect ENT, Inc.	Equity
XES	SPDR S&P Oil & Gas Equipment & Svcs ETF	ETF
XHB	SPDR S&P HOMEBUILDERS	ETF
XHR	Xenia Hotels & Resorts, Inc.	Equity
XIN	Xinyuan Real Estate Company LTD	Equity
XLB	MATERIALS SELECT SECTOR SPDR	ETF
XLC	Communication Services Select Sect SPDR ETF	ETF
XLE	ENERGY SELECT SECTOR SPDR	ETF
XLF	FINANCIAL SELECT SECTOR SPDR	ETF
XLI	INDUSTRIAL SELECT SECTOR SPDR	ETF
XLK	TECHNOLOGY SELECT SECTOR SPDR	ETF
XLNX	XILINX INC.	Equity
XLP	CONSUMER STAPLES SELECT SECTOR SPDR	ETF
XLRE	Real Estate Select Sector SPDR	ETF
XLRN	ACCELERON PHARMA, INC.	Equity
XLU	UTILITIES SELECT SECTOR SPDR	ETF
XLV	HEALTH CARE SELECT SECTOR SPDR	ETF
XLY	CONSUMER DISCRETIONARY SELECT SPDR	ETF
XME	SPDR S&P METALS & MINING	ETF
XNCR	Xencor, Inc.	Equity
XNET	Xunlei Limited	Equity
XOG	Extraction Oil & Gas, Inc.	Equity
XOM	EXXON MOBIL CORPORATION	Equity
XONE	THE EXONE COMPANY	Equity
XOP	SPDR S&P OIL & GAS EXPLORATION & PROD	ETF
XPER	Xperi Holding Corporation	Equity
XPO	XPO Logistics, Inc.	Equity
XPP	ProShares Ultra FTSE China 50	ETF
XRAY	DENTSPLY INTL, INC.	Equity
XRT	SPDR S&P RETAIL	ETF
XRX	XEROX CORPORATION	Equity
XXII	22ND CENTURY GROUP, INC.	Equity
XYL	Xylem Inc.	Equity

Securities List

Und Symbol	Company Name	Inst Type
YANG	Direxion Daily FTSE China Bear 3x Shares	ETF
YCS	ProShares UltraShort Yen	ETF
YELP	YELP, INC.	Equity
YETI	YETI Holdings, Inc.	Equity
YEXT	Yext, Inc.	Equity
YINN	Direxion Daily China 3X Bull Shares	ETF
YNDX	Yandex NV	Equity
YPF	YPF S.A.	Equity
YRCW	YRC Worldwide Inc	Equity
YRD	Yirendai Ltd.	Equity
YUM	YUM! BRANDS, INC.	Equity
YUMC	Yum China Holdings, Inc.	Equity
YY	YY INC.	Equity
Z	ZILLOW GROUP, INC.	Equity
ZAGG	ZAGG Inc	Equity
ZBH	Zimmer Bionet Holdings, Inc.	Equity
ZBRA	ZEBRA TECHNOLOGIES CORP.	Equity
ZEN	ZENDESK, INC.	Equity
ZEUS	OLYMPIC STEEL INC.	Equity
ZG	Zillow Group, Inc	Equity
ZGNX	ZOGENIX, INC.	Equity
ZION	ZIONS BANCORP	Equity
ZIOP	Ziopharm Oncology, Inc.	Equity
ZIXI	ZIX CORPORATION	Equity
ZM	Zoom Video Communications. Inc.	Equity
ZN	Zion Oil & Gas Inc.	Equity
ZNGA	ZYNGA, INC.	Equity
ZNH	China Southern Airlines Co. Ltd.	Equity
ZS	Zscaler, Inc.	Equity
ZSL	ProShares UltraShort Silver (20 shares)	ETF
ZTO	ZTO Express (Cayman) Inc.	Equity
ZTS	ZOETIS INC.	Equity
ZUMZ	ZUMIEZ INC	Equity
ZUO	Zuora, Inc.	Equity
ZVO	Zovio Inc.	Equity
ZYME	Zymeworks Inc	Equity
ZYNE	Zynerba Pharmaceuticals, Inc.	Equity