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 PEARL, LLC ("PEARL")**
**Amendment 2020-7 to Form 1 Application**

Dear Ms. Marshall:

Enclosed for official filing is Amendment 2020-7 to the Form 1 Application of PEARL, 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<br>Page 1<br>Execution Page | **UNITED STATES SECURITIES AND EXCHANGE COMMISSION<br>WASHINGTON, D.C. 20549<br>APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR, REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANGE ACT** | Date filed (MM/DD/YY):<br><br>06/30/2020 | OFFICIAL USE ONLY |
|---|---|---|---|

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

INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACTS MAY CONSTITUTE CRIMINAL VIOLATIONS

☐ APPLICATION ☒ AMENDMENT

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

2. Provide the applicant's primary street address (Do not use a P.O. Box): 7 Roszel Road, Suite 1A, Princeton, NJ 08540

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

20012260

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

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

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

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

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

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

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

MIAX PEARL, LLC

Date: June 30, 2020

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

Subscribed and sworn before me this 30th 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 PEARL, LLC is a wholly-owned subsidiary of Miami International Holdings, Inc. ("MIH").

5. *Brief description of business or functions*: Miami International Holdings, Inc. ("Miami Holdings") is a holding company which holds 100% of the equity of Miami International Securities Exchange, LLC, MIAX PEARL, LLC, Miami International Technologies, LLC, MIAX Global, LLC, MIAX Emerald, LLC, Miami International Futures Exchange, LLC, 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 and Chief Information Security Officer |
| Matthew Rotella | Senior Vice President – Chief Technology Officer |
| Joseph W. Ferraro III | Senior Vice President – Deputy General Counsel |
| Deborah Carroll | Senior Vice President – Associate General Counsel |
| Amy Neiley | Senior Vice President – Trading Operations and Listings |
| Roli Bhotika | Vice President – Head of Business Development |
| Rodney Hester | Vice President – Systems Infrastructure |
| Shawn Hughes | Vice President – Project Management |
| James O'Neil | Vice President and Director of Physical Security and Safety |
| Vinay Rao | Vice President – Trading Systems Development |
| Siddharth Sahoo | Vice President – Trading Systems Development |

| Name | Title |
|---|---|
| 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:

| 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, Chief Regulatory Officer and Chief Compliance Officer |
| Shelly Brown | Executive Vice President – Strategic Planning and Business Development |
| John Smollen | Executive Vice President – Head of Exchange Traded Products and Strategic Relations |
| Randy Foster | Senior Vice President – Business Systems Development |
| Harish Jayabalan | Senior Vice President – Chief Risk Officer and Chief Information Security Officer |
| Matthew Rotella | Senior Vice President – Chief Technology Officer |
| Joseph W. Ferraro III | Senior Vice President – Deputy General Counsel |
| Deborah Carroll | Senior Vice President, Associate General Counsel and Assistant Corporate Secretary |
| Joseph S. Bracco | Senior Vice President – Head of Sales |
| Amy Neiley | Senior Vice President – Trading Operations and Listings |
| Roli Bhotika | Vice President – Head of Business Development |
| Lawrence O'Leary | Vice President – Market Surveillance |
| Laurence Gardner | Vice President – Regulatory Operations |
| Rodney Hester | Vice President – Systems Infrastructure |
| Shawn Hughes | Vice President – Project Management |
| James O'Neil | Vice President and Director of Physical Security and Safety |

| Name | Title |
|---|---|
| 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:

| Directors |
|---|
| 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 |

| Observers |
|---|
| 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:

| Audit Committee |
|---|
| Robert D. Prunetti (Chair) |
| Michael P. Ameen |
| John E. McCormac |

| Compensation Committee |
|---|
| J. Gray Teekell (Chair) |
| Robert D. Prunetti |
| Cynthia Schwarzkopf |

| Regulatory Oversight Committee |
|---|
| Lindsay L. Burbage (Chair) |
| Leslie Florio |
| Lawrence E. Jaffe |

| Appeals Committee |
|---|
| Lawrence Jaffe (Chair) |
| Robert Castrignano |
| Kurt M. Eckert |

| Technology Committee |
|---|
| Leslie Florio (Chair) |
| Robert Castrignano |
| Marianne Deane |
| 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. 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:

| Name | Title |
|---|---|
| Thomas P. Gallagher | Chairman and Chief Executive Officer |
| Douglas M. Schafer, Jr. | President and Chief Information Officer |
| Barbara Comly | Executive Vice President, General Counsel and Corporate Secretary |
| 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 |
| Harish Jayabalan | Vice President – Technical Support and Product Specialist |
| James O'Neil | Vice President and Director of Physical Security and Safety |
| Tia Toms | Vice President – Administration |

| Name | Title |
|---|---|
| Kelly Fitzgerald | Assistant Vice President – Controller |

***Directors of Miami International Technologies, LLC***

The following persons are the directors of Miami International Technologies, LLC:

| Name |
|---|
| Thomas P. Gallagher |

10. *An indication of whether such business or organization ceased to be associated with the applicant during the previous year, and a brief statement of the reasons for termination of the association*: Not applicable.

## D. MIAX GLOBAL, LLC

1. *Name*: MIAX Global, LLC
*Address*: 7 Roszel Road, 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.

## E. MIAMI INTERNATIONAL FUTURES EXCHANGE, LLC

1. *Name*: Miami International Futures 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 November 30, 2007.

4. *Brief description of nature and extent of affiliation*: Miami International Futures Exchange, LLC ("MIAX Futures") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions*: MIAX Futures is not yet active. Miami International Holdings, Inc. may develop MIAX Futures as a futures exchange under the regulation of the CFTC. If MIAX Futures becomes operational, it will perform functions performed by a futures exchange.

6. *A copy of the constitution*: Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Amended and Restated Certificate of Formation dated June 17, 2011 is attached.**

8. *A copy of existing by-laws or corresponding rules or instruments*: **The First Amended and Restated Limited Liability Company Agreement dated May 20, 2011 is attached.**

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

***Officers of Miami International Futures Exchange, LLC***

The following persons are the officers of Miami International Futures Exchange, LLC:

| Name | Title |
|---|---|
| Thomas P. Gallagher | Chairman |
| 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.

## F. MIAX EMERALD, LLC

1. *Name*: MIAX Emerald, 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 January 30, 2018.

4. *Brief description of nature and extent of affiliation*: MIAX Emerald, LLC ("MIAX Emerald") is wholly-owned by Miami International Holdings, Inc., which is the applicant's 100% owner.

5. *Brief description of business or functions*: MIAX Emerald is registered as a National Securities Exchange under Section 6 of the Securities Exchange Act of 1934, as amended. MIAX Emerald operates a fully electronic options trading platform.

6. *A copy of the constitution*: Not applicable.

7. *A copy of the articles of incorporation or association including all amendments*: **The Certificate of Formation dated January 30, 2018 is attached.**

*8.* *A copy of existing by-laws or corresponding rules or instruments*: **The Amended and Restated Limited Liability Company Agreement dated December 21, 2018 and By-Laws dated December 21, 2018 are attached.**

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

***Officers of MIAX Emerald, LLC***

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

| Name | Title |
|---|---|
| Thomas P. Gallagher | Chairman and Chief Executive Officer |
| Douglas M. Schafer, Jr. | Chief Information Officer and Executive Vice President |
| Barbara Comly | Executive Vice President, General Counsel and Corporate Secretary |
| 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 |

| 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 MIAX Emerald, LLC serve until their successors are appointed in accordance with the By-Laws of MIAX Emerald, LLC. Officers of MIAX Emerald, LLC will serve at the direction of the Board of Directors.

***Directors of MIAX Emerald, LLC***

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

| Name |
|---|
| Thomas P. Gallagher |
| Lindsay L. Burbage |
| Marianne Deane |
| Kurt M. Eckert |
| David S. Fleming |
| Leslie Florio |
| Kimberly M. Guadagno |
| Paul Jiganti |
| Michael Juneman |
| Joseph M. Kyrillos Jr. |
| John E. McCormac |
| Robert D. Prunetti |

***Committees of MIAX Emerald, LLC***

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

| Audit Committee |
|---|
| Robert D. Prunetti (Chair) |
| Joseph M. Kyrillos Jr. |
| John E. McCormac |

| Compensation Committee |
|---|
| Robert D. Prunetti (Chair) |
| Marianne Deane |
| Joseph M. Kyrillos Jr. |

| Regulatory Oversight Committee |
|---|
| Lindsay L. Burbage (Chair) |
| Leslie Florio |
| Kimberly M. Guadagno |

| Appeals Committee |
|---|
| Marianne Deane (Chair) |
| Kurt M. Eckert |
| Paul Jiganti |

| Technology Committee |
|---|
| Leslie Florio (Chair) |
| Marianne Deane |
| John E. McCormac |

10. *An indication of whether such business or organization ceased to be associated with the applicant during the previous year, and a brief statement of the reasons for termination of the association*: Not applicable.

## G. MIAX PRODUCTS, LLC

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

| Name | Title |
|---|---|
| Gregory A. Wojciechowski | President & Chief Executive Officer |
| Gregory A. Wojciechowski | Secretary |
| James McKirdy | Chief Compliance Officer |

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

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

| Council |
|---|
| 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 |
| **Alternate Council** |
| Alan Marshall (for Keith Stock and FFI International) |
| Malcolm Moseley (for Scott Lines) |

***Committees of The Bermuda Stock Exchange***

| **Business Development Committee** |
|---|
| Eric Sites |
| Jeff Conyers |
| Michael Neff |
| Keith Stock |
| Gregory A. Wojciechowski |

| **Compensation Committee** |
|---|
| Thomas P. Gallagher |
| David Brown |
| Jeff Conyers |
| Michael Neff |

| **Executive Management Committee** |
|---|
| Thomas P. Gallagher |
| David Brown |
| Jeff Conyers |
| Scott Lines |
| Michael Neff |

| **Listing Committee** |
|---|
| 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:

| Council |
|---|
| 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.

**FORM NO. 2**

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<br>2 Church Street<br>Hamilton HM 11<br>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 **BD$12,000.00** divided into shares of **BD$1.00** each. The minimum subscribed share capital of the Company is **BD$12,000.00**.

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**

(Subscribers)

(Witnesses)

SUBSCRIBED this 24th day of October, 2001.

FORM NO. 6

Registration No. 31198

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** 1st **day of** November **2001**

Eugene O'[illegible]

**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 Emerald, 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)**

| | 2019 | 2018 |
|---|---|---|
| **ASSETS** | | |
| CURRENT ASSETS | | |
| 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 |
| **LIABILITIES AND SHAREHOLDERS' EQUITY** | | |
| CURRENT LIABILITIES | | |
| 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 |
| SHAREHOLDERS' EQUITY | | |
| 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)**

| | Years Ended December 31, | |
|---|---|---|
| | **2019** | **2018** |
| REVENUES | | |
| Other revenue | $ 208,171 | $ 3,139 |
| Total revenues | 208,171 | 3,139 |
| 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 | 1,425,449 | 1,118,647 |
| Total operating expenses | 15,667,356 | 19,579,051 |
| OPERATING LOSS | (15,459,185) | (19,575,912) |
| 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 | 2,006,887 | - |
| NET LOSS | $ (30,026,703) | $ (30,346,200) |

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

| | Years Ended December 31, | |
|---|---|---|
| | **2019** | **2018** |
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| 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) |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Capital expenditures | (492,262) | (670,421) |
| Net cash provided by (used in) investing activities | (492,262) | (670,421) |
| CASH FLOWS FROM FINANCING ACTIVITIES | | |
| 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 |
| Non-cash investing activities | | |
| 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, 9th Floor
New York, NY 10017

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## 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.



Grant Thornton LLP is the U.S. member firm of Grant Thornton International Ltd (GTIL). GTIL and each of its member firms are separate legal entities and are not a worldwide partnership.

**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**

| | 2019 | 2018 |
|---|---|---|
| **ASSETS** | | |
| CURRENT ASSETS | | |
| 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 | 1,220,716 | 1,172,191 |
| 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 | 1,074,371 | 1,118,936 |
| Total assets | $ 27,932,355 | $ 24,387,647 |
| **LIABILITIES AND MEMBER'S EQUITY** | | |
| CURRENT LIABILITIES | | |
| 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 | 1,091,599 | 722,542 |
| Total current liabilities | 6,560,861 | 7,325,702 |
| Due to Miami International Holdings, Inc. | 227,945,358 | 243,559,226 |
| Long term debt | 703,550 | 531,030 |
| Total liabilities | 235,209,769 | 251,415,958 |
| Commitments and Contingencies (Note 5) | | |
| DEFICIT IN MEMBER'S EQUITY | | |
| Accumulated losses | (207,277,414) | (227,028,311) |
| Total member's deficit | (207,277,414) | (227,028,311) |
| Total liabilities and deficit in member's equity | $ 27,932,355 | $ 24,387,647 |

*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**

| | Years Ended December 31, | |
|---|---|---|
| | **2019** | **2018** |
| REVENUES | | |
| 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 |
| COST OF REVENUES | | |
| Transaction rebates | (22,665,989) | (28,170,516) |
| NET REVENUES | 54,729,663 | 63,701,014 |
| OPERATING EXPENSES INCURRED DIRECTLY OR ALLOCATED FROM PARENT | | |
| 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 |
| OPERATING PROFIT | 24,143,958 | 28,828,692 |
| Interest expense | (167,894) | (138,587) |
| Financing related costs | (4,225,167) | (4,428,017) |
| NET PROFIT (LOSS) | 19,750,897 | 24,262,088 |
| Member's deficit at beginning of year | (227,028,311) | (251,290,399) |
| Member's deficit at end of year | $ (207,277,414) | $ (227,028,311) |

*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**

| | Years Ended December 31, | |
|---|---|---|
| | **2019** | **2018** |
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| 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 | 25,265,734 | 28,701,770 |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Capital expenditures | (2,821,441) | (3,252,351) |
| Net cash used in investing activities | (2,821,441) | (3,252,351) |
| CASH FLOWS FROM FINANCING ACTIVITIES | | |
| Proceeds from debt | 140,645 | 130,134 |
| Repayments of term debt | (965,234) | (861,693) |
| Due to Miami International Holdings, Inc. | (15,613,868) | (24,833,119) |
| Net cash provided by (used in) financing activities | (16,438,457) | (25,564,678) |
| Increase (decrease) in cash and cash equivalents | 6,005,836 | (115,259) |
| Cash and cash equivalents at beginning of year | 965,861 | 1,081,120 |
| Cash and cash equivalents at end of year | $ 6,971,697 | $ 965,861 |
| Cash paid during the year for interest | $ 167,894 | $ 138,587 |
| Non-cash investing activities | | |
| Assets acquired under capital leases | $ 1,366,165 | $ 76,878 |
| Non-cash amount related to capitalized internally developed software | 108,270 | 304,491 |
| Total non-cash investing activities | $ 1,474,435 | $ 381,369 |

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

## 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 MIAX PEARL, LLC ("PEARL"), MIAX Emerald, LLC ("Emerald"), Miami International Technologies, LLC ("MIAX Technologies"), Miami International Futures Exchange, LLC ("MIAX Futures") and MIAX Global, LLC. MIAX 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. 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.

In November 2012, the Company completed the development of its trading systems in anticipation of an early December launch. On December 3, 2012, MIAX 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 MIAX 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 MIAX 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 MIAX 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 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 suffi-

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,

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 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 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

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

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:

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

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 | 126,499 |
| | $ 7,641,115 |

## 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

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 invalided 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.

**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.

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 | 1,184 |
| Total future payments | 1,838,298 |
| Less interest | 183,795 |
| Net capital lease liability | $ 1,654,503 |

## 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

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 MIAX 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.

## 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.

**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 Emerald, LLC

December 31, 2019 and 2018

# MIAX Emerald, LLC

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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.



Grant Thornton LLP is the U.S. member firm of Grant Thornton International Ltd (GTIL). GTIL and each of its member firms are separate legal entities and are not a worldwide partnership.

**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**

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

*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**

| | Year Ended December 31, 2019 | Period from Janaury 30, 2018 (inception) to December 31, 2018 |
|---|---|---|
| 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 | - |
| Total revenues | 21,319,441 | - |
| COST OF REVENUES | | |
| Transaction rebates | (11,055,990) | - |
| NET REVENUES | 10,263,451 | - |
| 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 |
| Total operating expenses | 15,863,768 | 13,470,631 |
| OPERATING LOSS | (5,600,317) | (13,470,631) |
| Interest expense | (173,584) | (112,718) |
| NET LOSS | (5,773,901) | (13,583,349) |
| Member's deficit at beginning of year | (13,583,349) | - |
| Member's deficit at end of year | $ (19,357,250) | $ (13,583,349) |

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

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

| | Year Ended December 31, 2019 | Period from Janaury 30, 2018 (inception) to December 31, 2018 |
|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| 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 | (6,170,716) | (11,613,598) |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Capital expenditures | (3,550,660) | (3,972,363) |
| Net cash used in investing activities | (3,550,660) | (3,972,363) |
| CASH FLOWS FROM FINANCING ACTIVITIES | | |
| Proceeds from debt | 112,135 | 94,477 |
| Repayments of term debt | (842,443) | (359,680) |
| Due to Miami International Holdings, Inc. | 14,264,628 | 15,851,164 |
| Net cash provided by financing activities | 13,534,320 | 15,585,961 |
| 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 | $ 3,812,944 | $ - |
| Cash paid during the year for interest | $ 173,584 | $ 112,718 |
| Non-cash investing activities | | |
| Assets acquired under capital leases | $ 392,468 | $ 2,104,930 |
| Non-cash amount related to capitalized internally developed software | 172,087 | 198,807 |
| Total non-cash investing activities | $ 564,555 | $ 2,303,737 |

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

## 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.

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.

**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.

*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

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:

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

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.

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 | 181,083 |
| | $ 3,426,353 |

## 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 InternationalSecurities 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 invalided 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 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.

**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 | 1,184 |
| Total future payments | 1,520,658 |
| Less interest | 130,906 |
| Net capital lease liability | $ 1,389,752 |

## 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

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.

# MIAMI INTERNATIONAL TECHNOLOGIES, LLC

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

## (Unaudited)

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

| | 2019 | 2018 |
|---|---|---|
| **ASSETS** | | |
| CURRENT ASSETS | | |
| 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 |
| **LIABILITIES AND MEMBER'S EQUITY** | | |
| CURRENT LIABILITIES | | |
| 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 |
| DEFICIT IN MEMBER'S EQUITY | | |
| 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)**

| | Years Ended December 31, | |
|---|---|---|
| | **2019** | **2018** |
| REVENUES | | |
| Other revenue | $ 276,232 | $ 279,000 |
| Total revenues | 276,232 | 279,000 |
| OPERATING EXPENSES | | |
| 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 | 20,896 | 21,625 |
| Total operating expenses | 1,635,229 | 1,786,870 |
| OPERATING LOSS | (1,358,997) | (1,507,870) |
| Interest expense | (24) | - |
| NET LOSS | $ (1,359,021) | $ (1,507,870) |
| Member's deficit at beginning of year | (10,138,493) | (8,630,623) |
| Member's deficit at end of year | $ (11,497,514) | $ (10,138,493) |

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

| | Years Ended December 31, | |
|---|---|---|
| | **2019** | **2018** |
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| 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) |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Capital expenditures | (131,755) | - |
| Net cash used in investing activities | (131,755) | - |
| CASH FLOWS FROM FINANCING ACTIVITIES | | |
| 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 |
| Non-cash investing activities | | |
| 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)**

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

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

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

**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)*

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

**THE BERMUDA STOCK EXCHANGE**

Statement of Operations and Deficit

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

| | 2019 | 2018 |
|---|---|---|
| **Revenue** | | |
| Listing fees | $ 1,621,226 | $ 1,544,795 |
| Transaction fees | 373,532 | 480,646 |
| Trading membership fees | 149,500 | 148,562 |
| Other income | 66,850 | 59,771 |
| Total revenue | 2,211,108 | 2,233,774 |
| **Expenses** | | |
| 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 | 8,679 | 9,298 |
| Total expenses | 1,989,596 | 1,923,980 |
| Net income | 221,512 | 309,794 |
| Deficit, beginning of year | (2,396,915) | (2,706,709) |
| Deficit, end of year | $ (2,175,403) | $ (2,396,915) |

**THE BERMUDA STOCK EXCHANGE**

Statement of Cash Flows

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

| | 2019 | 2018 |
|---|---|---|
| **Cash flows from operating activities** | | |
| 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 | 3,218 | 44,429 |
| Net cash provided by operating activities | 170,001 | 545,054 |
| **Cash flows from investing activities** | | |
| Increase in term deposits | (767,591) | (9,868) |
| Purchase of property, plant and equipment | (15,004) | (9,285) |
| Net cash used in investing activities | (782,595) | (19,153) |
| Net (decrease) increase in cash and cash equivalents | (612,594) | 525,901 |
| Cash and cash equivalents, beginning of year | 1,264,947 | 740,046 |
| Cash and cash equivalents, end of year | $ 653,353 | $ 1,265,947 |
| **Supplemental information** | | |
| Interest paid | $ | $ – |

# 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 PEARL, LLC as of December 31, 2019 are attached. MIAX PEARL, LLC has no consolidated subsidiaries.

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**
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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.



Grant Thornton LLP is the U.S. member firm of Grant Thornton International Ltd (GTIL). GTIL and each of its member firms are separate legal entities and are not a worldwide partnership.

Grant Thornton

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**

| | 2019 | 2018 |
|---|---|---|
| **ASSETS** | | |
| CURRENT ASSETS | | |
| Cash and cash equivalents | $ 6,009,661 | $ 35,307 |
| Accounts receivable | 2,501,318 | 868,572 |
| Prepaid and other current assets | 1,515,196 | 915,263 |
| 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 | 1,467,740 | 1,654,265 |
| Total assets | $ 30,470,927 | $ 9,642,649 |
| **LIABILITIES AND MEMBER'S EQUITY** | | |
| CURRENT LIABILITIES | | |
| 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 | 100,390 | 432,741 |
| Total current liabilities | 9,776,213 | 3,323,648 |
| Due to Miami International Holdings, Inc. | 95,076,714 | 64,618,868 |
| Long term debt | 5,013,235 | 389,487 |
| Total liabilities | 109,866,162 | 68,332,003 |
| Commitments and Contingencies (Note 5) | | |
| DEFICIT IN MEMBER'S EQUITY | | |
| Accumulated losses | (79,395,235) | (58,689,354) |
| Total member's deficit | (79,395,235) | (58,689,354) |
| Total liabilities and deficit in member's equity | $ 30,470,927 | $ 9,642,649 |

*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**

| | Year Ended | |
|---|---|---|
| | **December 31, 2019** | **December 31, 2018** |
| REVENUES | | |
| 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 | 178,784 | 76,333 |
| Total revenues | 149,293,311 | 123,630,589 |
| COST OF REVENUES | | |
| Transaction rebates | (119,996,755) | (114,680,701) |
| NET REVENUES | 29,296,556 | 8,949,888 |
| OPERATING EXPENSES INCURRED DIRECTLY OR ALLOCATED FROM PARENT | | |
| 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 | 1,438,579 | 799,287 |
| Total operating expenses | 40,914,066 | 26,268,067 |
| OPERATING LOSS | (11,617,510) | (17,318,179) |
| Interest expense | (327,821) | (140,507) |
| Financing related costs | (8,760,550) | (4,972,145) |
| NET LOSS | (20,705,881) | (22,430,831) |
| Member's deficit at beginning of year | (58,689,354) | (36,258,523) |
| Member's deficit at end of year | $ (79,395,235) | $ (58,689,354) |

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

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

| | Years Ended December 31, | |
|---|---|---|
| | **2019** | **2018** |
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| 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 | (14,896,169) | (17,778,406) |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Capital expenditures | (8,390,618) | (570,941) |
| Net cash used in investing activities | (8,390,618) | (570,941) |
| CASH FLOWS FROM FINANCING ACTIVITIES | | |
| Proceeds from debt | 123,539 | 109,758 |
| Repayments of term debt | (1,320,244) | (1,085,108) |
| Due to Miami International Holdings, Inc. | 30,457,846 | 19,220,799 |
| Net cash provided by financing activities | 29,261,141 | 18,245,449 |
| Increase (decrease) in cash and cash equivalents | 5,974,354 | (103,898) |
| Cash and cash equivalents at beginning of year | 35,307 | 139,205 |
| Cash and cash equivalents at end of year | $ 6,009,661 | $ 35,307 |
| Cash paid during the year for interest | $ 322,222 | $ 140,507 |
| Non-cash investing activities | | |
| Assets acquired under capital leases | $ 8,211,429 | $ 76,878 |
| Non-cash amount related to capitalized internally developed software | 356,680 | 26,471 |
| Total non-cash investing activities | $ 8,568,109 | $ 103,349 |

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

## 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.

- 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.

### 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 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 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.

**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

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.

## 3. FIXED ASSETS

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

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

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 2018 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 | 127,473 |
| | $ 3,753,337 |

## 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 invalided 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 $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

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 | 2,368 |
| Total future payments | 9,167,961 |
| Less interest | 1,247,387 |
| Net capital lease liability | $ 7,920,574 |

## 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.

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

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

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 PEARL, LLC. Miami International Holdings, Inc. exercises "control" over the Exchange, as that term is defined in the Form 1 instructions. MIAX PEARL, LLC became a wholly-owned subsidiary of Miami International Holdings, Inc. on March 7, 2016.

# 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.

MIAX PEARL
PERFORMANCE, EXECUTION AND RELIABILITY

# MEMBER FIRMS

**ABN AMRO CLEARING CHICAGO LLC**

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

Approval Date: 2/6/2017
**Membership Activities:**
Clearance
International Tele #

SEC #: 8-34354
CRD #: 14020

**AKUNA SECURITIES LLC**

333 S. Wabash Avenue, Suite 2600
Chicago IL 60604
Tele #: (312) 994-4640

Approval Date: 4/17/2017
**Membership Activities:**
Registered Market Maker
International Tele #

SEC #: 8-68957
CRD #: 159041

**AMS DERIVATIVES B.V.**

Strawinskylaan 3095
Amsterdam, 1077ZX
Netherlands
Tele #:

Approval Date: 10/26/2018
**Membership Activities:**
Registered Market Maker & Order Entry
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: 2/6/2017
**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: 2/6/2017
**Membership Activities:**
Registered Market Maker, 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: 11/1/2018
**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: 2/6/2017
**Membership Activities:**
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: 2/6/2017
**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: 2/6/2017
**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: 2/6/2017
**Membership Activities:**
Order Entry & Clearance
International Tele #

SEC #: 8-52503
CRD #: 104031

**DEUTSCHE BANK SECURITIES INC.**

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

Approval Date: 2/6/2017
**Membership Activities:**
Order Entry & Clearance
International Tele #

SEC #: 8-17822
CRD #: 2525

**DRW SECURITIES, L.L.C.**

540 West Madison, Ste. 2500
Chicago IL 60661
Tele #: (312) 542-3231

Approval Date: 11/14/2017
**Membership Activities:**
Order Entry
International Tele #

SEC #: 8-51241
CRD #: 45908

**GLOBAL EXECUTION BROKERS, LP**

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

Approval Date: 2/6/2017
**Membership Activities:**
Order Entry
International Tele #

SEC #: 8-65878
CRD #: 126407

**GOLDMAN SACHS & CO. LLC**

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

Approval Date: 2/6/2017
**Membership Activities:**
Order Entry & Clearance
International Tele #

SEC #: 8-129
CRD #: 361

**GROUP ONE TRADING LP**

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

Approval Date: 2/6/2017
**Membership Activities:**
Order Entry
International Tele #

SEC #: 8-47762
CRD #: 37484

**GTS SECURITIES LLC**

545 Madison Avenue, 15th Fl.
New York NY 10022
Tele #: (212) 715-2830

Approval Date: 2/25/2020
**Membership Activities:**
Registered Market Maker & Order Entry
International Tele #

SEC #: 8-68126
CRD #: 149224

**HRT FINANCIAL LLC**

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

Approval Date: 4/5/2017
**Membership Activities:**
Order Entry
International Tele #

SEC #: 8-68430
CRD #: 152144

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

Approval Date: 2/6/2017

SEC #: 8-52600

233 South Wacker Drive, Ste. 4300

CRD #: 104143

Chicago IL 60606

**Membership Activities:**

Registered Market Maker

Tele #: (312) 244-3300

International Tele #

**INSTINET, LLC**

Worldwide Plaza

Approval Date: 2/6/2017

SEC #: 8-23669

309 West 49th Street

CRD #: 7897

**Membership Activities:**

New York NY 10019

Order Entry & Clearance

Tele #: (212) 310-9500

International Tele #

**INTERACTIVE BROKERS LLC**

Approval Date: 2/6/2017

SEC #: 8-47257

One Pickwick Plaza - 2nd Floor

CRD #: 36418

**Membership Activities:**

Greenwich CT 06830

Order Entry & Clearance

Tele #: (203) 618-5710

International Tele #

**J.P. MORGAN SECURITIES LLC**

Approval Date: 2/6/2017

SEC #: 8-35008

383 Madison Avenue

CRD #: 79

**Membership Activities:**

New York NY 10179

Order Entry & Clearance

Tele #: (201) 595-8471

International Tele #

**JANE STREET CAPITAL, LLC**

Approval Date: 4/2/2018

SEC #: 8-52275

250 Vesey Street - 6th Floor

CRD #: 103782

**Membership Activities:**

New York NY 10281

Order Entry

Tele #: (646) 759-6000

International Tele #

**JANE STREET OPTIONS, LLC**

Approval Date: 4/2/2018

SEC #: 8-66813

250 Vesey Street - 6th Floor

CRD #: 134159

**Membership Activities:**

New York NY 10281

Order Entry

Tele #: (646) 759-6000

International Tele #

**JEFFERIES LLC**

Approval Date: 2/6/2017

SEC #: 8-15074

520 Madison Avenue - 11th Floor

CRD #: 2347

**Membership Activities:**

New York NY 10022

Order Entry & Clearance

Tele #: (212) 284-2300

International Tele #

**JUMP TRADING, LLC**

Approval Date: 2/11/2019

SEC #: 8-52989

600 West Chicago Avenue, Ste. 825

CRD #: 106124

**Membership Activities:**

Chicago IL 60654

Registered Market Maker

Tele #: (312) 205-8900

International Tele #

**MATRIX EXECUTIONS, LLC**

Approval Date: 2/6/2017

SEC #: 8-48255

135 S. LaSalle Street, Ste. 300

CRD #: 38455

**Membership Activities:**

Chicago IL 60603

Order Entry

Tele #: (312) 334-8000

International Tele #

**MERRILL LYNCH PROFESSIONAL CLEARING CORP.**

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

Approval Date: 2/6/2017
**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: 2/6/2017
**Membership Activities:**
Registered Market Maker, Order Entry & Clearance
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: 2/6/2017
**Membership Activities:**
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: 2/6/2017
**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: 2/6/2017
**Membership Activities:**
Registered Market Maker & 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:**
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:**
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: 9/12/2017
**Membership Activities:**
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: 2/6/2017
**Membership Activities:**
Order Entry & Clearance
International Tele #

SEC #: 8-22651
CRD #: 7654

**VIRTU AMERICAS LLC**

One Liberty Plaza
165 Broadway
New York NY 10006
Tele #: (800) 544-7508

Approval Date: 10/1/2019
**Membership Activities:**
Registered Market Maker, Order Entry & Clearance
International Tele #

SEC #: 8-68193
CRD #: 149823

**VOLANT EXECUTION, LLC**

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

Approval Date: 2/6/2017
**Membership Activities:**
Order Entry & Clearance
International Tele #

SEC #: 8-66826
CRD #: 134284

**WEDBUSH SECURITIES INC.**

1000 Wilshire Boulevard, Suite 900
ATTN: Business Conduct
Los Angeles CA 90017
Tele #: (213) 688-8090

Approval Date: 2/6/2017
**Membership Activities:**
Clearance
International Tele #

SEC #: 8-12987
CRD #: 877

**WELLS FARGO SECURITIES, LLC**

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

Approval Date: 2/6/2017
**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: 2/6/2017
**Membership Activities:**
Order Entry & Clearance
International Tele #

SEC #: 8-65336
CRD #: 120719

**WOLVERINE TRADING, LLC**

175 W. Jackson Blvd., Ste. 200
Chicago IL 60604
Tele #: (312) 884-3490

Approval Date: 2/6/2017
**Membership Activities:**
Registered Market Maker
International Tele #

SEC #: 8-47484
CRD #: 36848

**Total Firms 42**

# 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.

| MIAX PEARL 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 |
| ACIA | Acacia Communications, 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 PROCESSINGINC | Equity |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| ADPT | Adaptive Biotechnologies Corp | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| ALB | Albemarle Corporation | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| ANAB | AnaptysBio, Inc. | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| ARWR | ARROWHEAD RESEARCH CORP. | Equity |
| 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 |
| AVDL | Avadel Pharmaceuticals plc | Equity |
| AVEO | AVEO Pharmaceuticals, Inc. | Equity |
| AVGO | Broadcom Inc. | Equity |
| AVID | AVID TECHNOLOGY,INC | Equity |
| AVLR | Avalara, Inc. | Equity |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| AVNS | Avanos Medical, Inc. | Equity |
| AVT | AVNET INC | Equity |
| 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 |
| BBVA | BANCO BILBAO VIZCAYA | Equity |
| BBW | Build-A-Bear Workshop, Inc | Equity |
| BBY | BEST BUY COMPANY, INC. | Equity |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| BC | BRUNSWICK CORP | Equity |
| BCC | Boise Cascade Company | Equity |
| BCE | BCE INC | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| BKD | Brookdale Senior Living Inc | Equity |
| BKE | The Buckle, Inc. | Equity |
| BKEP | Blueknight Energy Partners, L.P. | Equity |
| 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 Intllgnc 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 |
| BREW | Craft Brew Alliance, 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| BSBR | Banco Santander Brasil SA | Equity |
| BSGM | BioSig Technologies, Inc. | Equity |
| BSQR | BSQUARE Corp. | Equity |
| BSX | BOSTON SCIENTIFIC CORPORATION | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| CBAY | CymaBay Therapeutics, Inc. | Equity |
| CBB | Cincinnati Bell Inc. | Equity |
| CBIO | Catalyst Biosciences, Inc. | Equity |
| CBL | CBL & Associates Properties, Inc. | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| CLVS | CLOVIS ONCOLOGY, INC. | Equity |
| CLW | Clearwater Paper Corporation | Equity |
| CLX | CLOROX CO | Equity |
| CM | Canadian Imperial Bank of Commerce | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| CSTM | CONSTELLIUM N.V | Equity |
| CSU | Capital Senior Living Corp. | Equity |
| CSV | Carriage Services, Inc. | Equity |
| CSX | CSX CORPORATION | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| DAL | DELTA AIR LINES INC. | Equity |
| DAN | Dana Holding Corporation | Equity |
| DAR | Darling International, Inc. | Equity |
| DB | DEUTSCHE BANK AG | Equity |
| 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 |
| DBVT | DBV Technologies S.A. | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |
| DUST | Direxion Daily Gold Miners Bear 3X Shares | ETF |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| ENS | Enersys | Equity |
| ENTA | Enanta Pharmaceuticals, Inc. | Equity |
| ENTG | Entegris, Inc. | Equity |
| ENV | Envestnet, 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| ETM | Entercom Communications Corp. | Equity |
| ETN | EATON CORPORATION PLC | Equity |
| ETR | ENTERGY CORPORATION | Equity |
| ETRN | Equitrans Midstream Corp | Equity |
| ETSY | Etsy,Inc. | Equity |
| EUFN | iShares MSCI Europe Financials ETF | ETF |
| 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 |
| EWW | 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 | FREEPORT-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 |
| FIT | Fitbit, 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| GTT | GTT Communications, Inc. | Equity |
| GTX | Garrett Motion Inc | Equity |
| GTY | Getty Realty Corp. | Equity |
| GUSH | Direxion Dly S&P Oil&Gs Ex&Prd Bl 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 IBOXX $ HIGH YIELD CORPORATE BOND | ETF |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 | Insmed, 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 | Kratos 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 Cinenedia 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| NEOS | Neos Therapeutics, Inc. | Equity |
| NEP | NextEra Energy Partners, LP | Equity |
| NEPT | Neptune Technologies & Bioressources Inc | Equity |
| NERV | Minerva Neurosciences, Inc. | Equity |
| NET | Cloudflare, Inc. | Equity |
| NEWR | New Relic, Inc. | Equity |
| NEX | NexTier Oilfield Solutions Inc. | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 | Insperity, Inc. | Equity |
| NSTG | NanoString Technologies, Inc. | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |
| OGI | 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |
| QGEN | QIAGEN N V | 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 |
| RACE | Ferrari N.V. | 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |
| RESI | Front Yard Residential Corporation | 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| SAN | BANCO SANTANDER, S.A. | Equity |
| SAND | Sandstorm Gold Ltd. | Equity |
| SANM | Sanmina Corporation | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |
| SYY | 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 |
| TCO | Taubman Centers, 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| TEF | TELEFONICA S.A. | Equity |
| TEL | TE Connectivity Ltd. | Equity |
| TELL | Tellurian Inc. | Equity |
| TEN | TENNECO INC | Equity |
| TEO | Telecom Argentina S.A. | Equity |
| TER | TERADYNE,INC | Equity |
| 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 lletisim 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 | TUNIU CORPORATION | Equity |
| TOWN | TowneBank | Equity |
| TPC | Tutor Perini Corporation | Equity |
| TPCO | Tribune Publishing Company | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| VLY | 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| WUBA | 58.COM INC. | Equity |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| 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 |
| 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 |

| Und Symbol | Company Name | Inst Type |
|---|---|---|
| ZUMZ | ZUMIEZ INC | Equity |
| ZUO | Zuora, Inc. | Equity |
| ZVO | Zovio Inc. | Equity |
| ZYME | Zymeworks Inc | Equity |
| ZYNE | Zynerba Pharmaceuticals, Inc. | Equity |