



June 29, 2022

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

**RE: Miami International Securities Exchange, LLC ("MIAX")  
Amendment 2022-9 to Form 1 Application**

Dear Ms. Jackson:

Enclosed for official filing pursuant to Rule 6a-2(b) is Amendment 2022-9 to the Form 1 Application of MIAX, which includes the following:

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.

Sincerely,

*Barbara J. Comly*

Barbara J. Comly  
EVP, General Counsel & Corporate Secretary

Enclosure  
cc: Marlene Olsen

7 Roszel Road, Suite 1A  
Princeton, New Jersey 08540

1450 Brickell Avenue  
Suite 1100, 11th Floor Loft  
Miami, Florida 33131

[miaxoptions.com](http://miaxoptions.com)

|                                       |  |   |                         |
|---------------------------------------|--|---|-------------------------|
| Form 1<br>Page 1<br>Execution<br>Page | <b>UNITED STATES SECURITIES AND EXCHANGE COMMISSION</b><br><b>WASHINGTON, D.C. 20549</b><br><b>APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR,</b><br><b>REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION</b><br><b>FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANGE ACT</b> | Date filed<br>(MM/DD/YY):<br><br>06/29/22 | OFFICIAL<br>USE<br>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: Miami International Securities Exchange, LLC
2. Provide the applicant's primary street address (Do not use a P.O. Box): 7 Roszel Road, Suite 1A, Princeton, NJ 08540
3. Provide the applicant's mailing address (if different):
4. Provide the applicant's business telephone and facsimile number:  
Telephone: 609-897-7300; Facsimile: 609-987-2210
5. Provide the name, title and telephone number of a contact employee:  
Barbara J. Comly, EVP, General Counsel & Corporate Secretary  
609-897-7315
6. Provide the name and address of counsel for the applicant:  
Barbara J. Comly, EVP, General Counsel & Corporate Secretary  
Miami International Securities Exchange, 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): 9/10/07                      (b) State/Country of formation: Delaware
- (c) Statute under which applicant was organized: Delaware Limited Liability Company Act (6 Del. C. § 18-101, 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.

MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

Date: June 29, 2022

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

Subscribed and sworn before me this \_\_\_\_ day of \_\_\_\_\_, 2022.

Based upon relief from Commission Staff and difficulties arising from COVID-19, Miami International Securities Exchange, LLC is making this filing without a notarization.

\_\_\_\_\_  
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 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, 2021 are attached.
2. Audited unconsolidated financial statements of MIAX PEARL, LLC as of December 31, 2021 are attached.
3. Audited unconsolidated financial statements of MIAX Emerald, LLC as of December 31, 2021 are attached.
4. Unaudited unconsolidated financial statements of Miami International Technologies, LLC as of December 31, 2021 are attached.
5. Unaudited unconsolidated financial statements of MIAX Futures, LLC as of December 31, 2021 are attached.
6. Unaudited unconsolidated financial statements of The Bermuda Stock Exchange as of December 31, 2021 are attached.
7. Unaudited unconsolidated financial statements of M 402 Holdings, LLC as of December 31, 2021 are attached. (Balance sheet provided; no profit & loss statement as no income or expenses as of December 31, 2021.)
8. Unaudited unconsolidated financial statements of Minneapolis Grain Exchange, LLC as of December 31, 2021 are attached.
9. Unaudited unconsolidated financial statements of ConvexityShares, LLC as of December 31, 2021 are attached.
10. MIAX Global, LLC, MIAX Products, LLC, and BSD Nominee Limited are not active and financial statements are not available for these companies.

## 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 Miami International Securities Exchange, LLC as of December 31, 2021 are attached. Miami International Securities Exchange, LLC has no consolidated subsidiaries.

## 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 Miami International Securities Exchange, LLC. Miami International Holdings, Inc. exercises "control" over the Exchange, as that term is defined in the Form 1 instructions. Miami International Securities Exchange, LLC became a wholly-owned subsidiary of Miami International Holdings, Inc. on February 1, 2008.

## **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 16, 2022, including the information set forth in items 1-6 above.

## 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 17, 2022, indicating for each the name of the issuer and a description of the security.
2. None.
3. None.
4. None.

**MIAMI INTERNATIONAL HOLDINGS, INC.**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2021



**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**Unconsolidated Statement of Financial Condition (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

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| <b>Assets</b>   |                   |
|---|-------------------|
| Current assets:   |                   |
| Cash and cash equivalents   | \$ 46,933         |
| Restricted cash   | 5,583             |
| Other current assets  | 5,191             |
| Total current assets  | <u>57,707</u>     |
| Due from subsidiaries (to Miami International Holdings, Inc.)   | 380,648           |
| Investment in third parties   | 11,592            |
| Investment in subsidiaries  | 32,985            |
| Fixed assets, net   | 20,247            |
| Internally developed software, net  | 22,361            |
| Goodwill  | 34,419            |
| Other intangible assets, net  | 85,319            |
| Total assets  | <u>\$ 645,278</u> |
| <b>Liabilities and stockholders' equity</b>   |                   |
| Current liabilities:  |                   |
| Accounts payable and other liabilities  | \$ 20,455         |
| Accrued compensation payable  | 17,860            |
| Current debt of long term debt  | 15,000            |
| Total current liabilities   | <u>53,315</u>     |
| Deferred income taxes   | 10,084            |
| Long term debt  | 149,080           |
| Other non-current liabilities   | 304,110           |
| Total liabilities   | <u>516,589</u>    |
| Stockholders' equity:   |                   |
| Preferred stock - par value \$0.001 (25,000,000 authorized, 822,100 issued and outstanding at December 31, 2021 )   | 1                 |
| Common stock - voting and nonvoting, par value \$0.001 (600,000,000 authorized (400,000,000 voting, 200,000,000 nonvoting); 89,448,831 issued and outstanding non-puttable common stock at December 31, 2021 (82,353,122 voting, 7,095,709 nonvoting) | 89                |
| Additional paid-in capital  | 591,676           |
| Accumulated deficit   | (462,926)         |
| Total Miami International Holdings, Inc. stockholders' equity   | <u>128,840</u>    |
| Non-controlling interest in consolidated subsidiaries   | <u>(151)</u>      |
| Total stockholders' equity  | <u>128,689</u>    |
| Total liabilities and stockholders' equity  | <u>\$ 645,278</u> |

**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**Unconsolidated Statement of Income (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

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|   |    |                         |
|---|----|-------------------------|
| Revenues:   |    |                         |
| Market data fees  | \$ | 4                       |
| Other revenue   |    | 13,996                  |
| Total revenues  |    | <u>14,000</u>           |
| Operating expenses:   |    |                         |
| Compensation and benefits   |    | 11,180                  |
| Information technology and communication costs                              |    | 553                     |
| Depreciation and amortization   |    | 14,773                  |
| Occupancy costs   |    | 1,024                   |
| Professional fees and outside services                                      |    | 11,653                  |
| Marketing and business development  |    | 2,163                   |
| General, administrative, and other  |    | 4,874                   |
| Total operating expense   |    | <u>46,220</u>           |
| Operating loss  |    | (32,220)                |
| Non-operating (expense) income:   |    |                         |
| Change in fair value of warrants on puttable shares & puttable common stock |    | (118,723)               |
| Interest expense and amortization of debt issuance cost                     |    | (19,021)                |
| Investment gain   |    | 19,522                  |
| Other expenses  |    | 4,202                   |
| Loss before income tax provision  |    | <u>(146,240)</u>        |
| Income tax expense  |    | <u>(1,374)</u>          |
| Net loss  |    | (147,614)               |
| Net loss attributable to non-controlling interest                           |    | <u>(151)</u>            |
| Net loss attributable to common stock holders                               | \$ | <u><u>(147,463)</u></u> |

**MIAX PEARL, LLC**

Financial Statements

As of and for the year ended December 31, 2021

(with Independent Auditors' Report Thereon)

# MIAX PEARL, LLC

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KPMG LLP  
345 Park Avenue  
New York, NY 10154-0102

## Independent Auditors' Report

The Board of Directors  
MIAX Pearl, LLC:

### *Opinion*

We have audited the financial statements of MIAX Pearl, LLC (the Company), which comprise the statement of financial condition as of December 31, 2021, and the related statements of income and changes in member's deficit, and cash flows for the year then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021, and the results of its operations and its cash flows for the year then ended in accordance with U.S. generally accepted accounting principles.

### *Basis for Opinion*

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Responsibilities of Management for the Financial Statements*

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

### *Auditors' Responsibilities for the Audit of the Financial Statements*

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.



- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

KPMG LLP

New York, New York  
June 24, 2022

**MIAX PEARL, LLC**  
**Statement of Financial Condition**  
**December 31, 2021 (dollars in thousands)**

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| <b>Assets</b>                             |           |
|---|-----------|
| Current assets:                           |           |
| Cash                                      | \$ 23,389 |
| Accounts receivable                       | 16,289    |
| Other current assets                      | 237       |
| Total current assets                      | 39,915    |
| Notes receivable, net                     | 8,108     |
| Other assets                              | 1,315     |
| Total assets                              | \$ 49,338 |
| <b>Liabilities and Member's Deficit</b>   |           |
| Current liabilities:                      |           |
| Accounts payable and other liabilities    | \$ 13,523 |
| Total current liabilities                 | 13,523    |
| Due to Miami International Holdings, Inc. | 110,779   |
| Deferred transaction revenue              | 4,036     |
| Total liabilities                         | 128,338   |
| Commitments and contingencies             | -         |
| Member's deficit                          |           |
| Accumulated losses                        | (79,000)  |
| Total member's deficit                    | (79,000)  |
| Total liabilities and member's deficit    | \$ 49,338 |

*See accompanying notes to financial statements.*

**MIAX PEARL, LLC**  
**Statement of Income and Changes in Member's Deficit**  
**Year ended December 31, 2021 (dollars in thousands)**

---

|  |                    |
|--|--------------------|
| Revenues:                                      |                    |
| Transaction fees                               | \$ 280,326         |
| Access fees                                    | 17,144             |
| Market data fees                               | 12,484             |
| Other revenue                                  | 105                |
| Total revenues                                 | <u>310,059</u>     |
| Cost of revenues:                              |                    |
| Transaction rebates                            | 246,620            |
| Brokerage and exchange fees                    | 2,299              |
| Section 31 fees                                | 6,966              |
| Equity rights programs                         | 2,668              |
| Other  | 1,002              |
| Total cost of revenues                         | <u>259,555</u>     |
| Revenues less cost of revenues                 | 50,504             |
| Operating expenses:                            |                    |
| Compensation and benefits                      | 19,672             |
| Information technology and communication costs | 17,448             |
| Occupancy costs                                | 1,189              |
| Professional fees and outside services         | 4,581              |
| Marketing and business development             | 986                |
| General, administrative, and other             | 2,577              |
| Total operating expenses                       | <u>46,453</u>      |
| Operating income                               | 4,051              |
| Non-operating income:                          |                    |
| Interest income                                | 38                 |
| Net profit                                     | <u>4,089</u>       |
| Member's deficit at beginning of year          | (83,089)           |
| Member's deficit at end of year                | <u>\$ (79,000)</u> |

*See accompanying notes to financial statements.*



**MIAX PEARL, LLC**  
**Statement of Cash Flows**  
**Year ended December 31, 2021 (dollars in thousands)**

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|   |                  |
|---|------------------|
| Cash flow from operating activities:  |                  |
| Net profit  | \$ 4,089         |
| Adjustments to reconcile net loss to net cash provided by (used in) operating activities: |                  |
| Provision for notes receivable credit losses  | 1,566            |
| Changes in operating assets and liabilities:  |                  |
| Accounts receivable   | (4,648)          |
| Notes receivable  | (6,265)          |
| Other assets  | 1,279            |
| Accounts payable and other liabilities  | 978              |
| Deferred transaction revenue  | (5,395)          |
| Net cash used in operating activities   | <u>(8,396)</u>   |
| Cash flow from financing activities:  |                  |
| Due to Miami International Holdings, Inc.   | <u>9,967</u>     |
| Net cash provided by financing activities   | <u>9,967</u>     |
| Increase in cash and cash equivalents   | 1,571            |
| Cash and cash equivalents at beginning of year  | <u>21,818</u>    |
| Cash and cash equivalents at end of year  | <u>\$ 23,389</u> |

*See accompanying notes to financial statements.*

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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**1. NATURE OF OPERATIONS**

MIAX PEARL, LLC (“PEARL” or the “Company”) is a wholly owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), and provides a marketplace for the trading of equity options and cash equities products for its exchange members.

**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

***Basis of Presentation***

The accompanying financial statements have been prepared in accordance with U.S generally accepted accounting principles (“GAAP”). The accompanying financial statements for the Company have been prepared from the separate records maintained by the Parent and may not necessarily be indicative of the conditions that would have existed or the results of operations if the Company had been operated as an unaffiliated company. Portions of certain income and expenses represent allocations made from the Parent and other affiliated subsidiaries of the Parent to the Company as disclosed. See Note 5 (“Related Party Transactions”) for more information on related party transactions.

***Use of Estimates***

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

***Change in accounting principles - Consolidated Audit Trail (“CAT”)***

On January 1, 2021, the Company made a voluntary change to its accounting policy related to the treatment of promissory notes issued to the Company by CAT NMS LLC and CAT LLC to fund the ongoing development of CAT as detailed in Note 3 - Notes Receivable, net. Prior to adopting the new policy, the Company had fully expensed these promissory notes upon purchase. Under the new policy adopted during 2021 and applied retroactively to prior periods, the Company is expensing approximately 25% of the CAT notes based upon the expected amount recoverable, subject to SEC approval of industry fee model discussed in Note 3. The change in accounting policy resulted in a \$4.7 million increase to net profit and a \$3.4 million decrease to opening member's deficit for the year ended December 31, 2021.

Change in accounting estimate - Allocation of certain assets and liabilities held at the Parent

A change in accounting estimate was made during 2021 related to the allocation of assets and liabilities amongst the Parent and its wholly owned subsidiaries. Historically, assets and liabilities held at the Parent, were allocated to the Parent's wholly owned subsidiaries based on management’s estimate of the usage of the specific asset or the estimated benefits received by the Company. During 2021, a legal entity approach was adopted wherein assets and liabilities were presented on the statement of financial conditions of the entity that has the legal right or obligation to the asset and liability. Therefore, for the year ended December 31, 2021, fixed assets, internally developed software, debt obligations and certain accrued liabilities, which are held at the Parent, were not allocated to the Company and as such not presented on the statement of financial conditions. This change in accounting estimate was accounted for prospectively beginning January 1, 2021 and there was no impact to the statement of income and member's deficit.

***Cash and Cash Equivalents***

The Company's operations are funded by its Parent through a centralized treasury function. Cash and cash equivalents include cash and amounts due from banks and interest-bearing bank balances. The Company places its cash and cash equivalents with financial institutions and at times, cash held in bank accounts may exceed the Federal Deposit Insurance Corporation insurance limit. The Company monitors its risk of loss associated with such balances and deems the risk of loss

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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to be remote. The carrying values of the Company's cash and cash equivalents approximates fair value. The Company did not have any restricted cash as of December 31, 2021.

***Accounts Receivable***

Accounts receivable are concentrated with the Company's member firms and market data distributors and are primarily collected through the Options Clearing Corporation ("OCC") and the National Securities Clearing Corporation ("NSCC"). Transaction fees are netted against the liquidity payments for each member firm and the balance owed from a member firm is recognized as accounts receivable, net if the amount is to be received and as accounts payable and other liabilities if the amount is owed to the member firm. Management evaluates the Company's accounts receivables periodically and determines an appropriate allowance for uncollectible accounts receivable based on anticipated collections. In circumstances where a specific member firm's inability to meet its financial obligations is probable, the Company records a provision for uncollectible accounts against the member firm's receivable.

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

The majority of all of the Company's expenditures to date have been funded by the Parent. In certain instances the Parent's other wholly owned subsidiaries may incur certain expenditure on behalf of the Company. Expenses incurred by the Company are settled on its behalf by the Parent or the Parent's other wholly owned subsidiaries and allocated through intercompany charges and are net settled with the Parent resulting in payables due to Miami International Holdings, Inc. See Note 5 ("Related Party Transactions") for more information on related party transactions.

Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace for the trading of options and cash equities, are primarily attributable to the Company and its affiliates including Miami International Securities Exchange, LLC ("MIAX") and MIAX Emerald, LLC ("Emerald"). The Company's allocated portion of cost are included in the accompanying statements of income and member's deficit. The Company considers changes in Due to Miami International Holdings Inc., to be financing activity for purposes of the statements of cash flows.

***Revenue Recognition***

The Company generates revenues by assessing fees to its member firms for the services it renders, which include providing access to its exchanges, enabling transaction-based trading on its exchanges, and providing access to various market data. Revenue for the Company's services are recognized as control of the services are transferred to the customer. The amount recognized is the amount that reflects the consideration the Company expects to be entitled to in exchange for its services.

The Company determines the transaction price at the outset of the arrangement based on the contractual and payment terms associated with the transaction. The typical term for the Company's contracts with customers ranges from the time it takes to complete a single transaction to one month, depending on the service being provided. Customers are usually billed each month in arrears with standard payment terms, though the Company does occasionally bill customers in advance. Fees associated with each contract are fixed within the month in which the service is provided.

The Company assesses the services promised in the contracts with customers and identifies a performance obligation for each promise to transfer to the customer a service that is distinct—i.e., if such service is separately identifiable and if a customer can benefit from it on its own or with other resources that are readily available to the customer.

*Transaction services:* Transaction services represent the customer's right to be matched on the exchange with a corresponding buyer or seller and to have the transaction executed. Fees are a function of three variables: (1) exchange fee rates; (2) overall industry trading volume; and (3) market share achieved by the exchange platforms. 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

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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accounted for as consideration payable to a customer and are recorded separately as transaction rebates, which are classified within cost of revenue in the accompanying statement of income and changes in member's deficit. In the event that a member firm prepays for transaction fees, revenue is recognized as transaction fees are incurred.

Transaction fees also result in regulatory fees. Regulatory fees include the options regulatory fee ("ORF") and Section 31 fees. ORF is in place to fund the Company's regulatory oversight function of the exchange marketplace and is determined based on the number of customer contracts and cannot be used for non-regulatory purposes. Section 31 fees are transaction fees charged by the SEC to the exchanges. The Section 31 fees charged to customers are based on the fee set by the SEC per notional value of transactions executed on the Company's securities markets and are calculated and billed monthly. The Section 31 fee collected by the Company is ultimately payable to the SEC, and is therefore classified within cost of revenues in the accompanying statement of income and changes in member's deficit.

*Access fees:* Access fees include allowing the customer to connect its network to one of the Company's exchanges for a specified period of time. Fees for these services are assessed to exchange members for the opportunity to trade and use other related functions of the exchanges. Access fees are billed monthly in accordance with the published fee schedule and recognized during the period the service is provided which is generally one month.

*Market data fees:* Market data fees include making market data available to customers either through direct subscriptions or through the Company's participation in U.S. Tape Plans. Market data revenue includes distributions from the U.S. Tape Plans, which is distributed based upon each individual exchange's market share of U.S. volume, trades, and/or quotes. Market data revenue also includes market data revenue earned from the sale of proprietary market data directly to the customer on a subscription basis. Market data revenue is recognized in the period the data is provided.

*Consideration payable to a customer:* As discussed in the Transaction-based services section above, transaction rebates are accounted for as consideration payable to a customer and reduce revenue in the period in which the rebate is earned by the customer and the rebate is provided. Additionally, the Company issues certain warrants to customers as part of its Equity Rights Programs detailed in Note 7. Under these programs, the Company records the fair value of the number of warrants that vest in a period as a cost of revenues. Customers vest in the warrants as and when they transact certain volumes of trades on the Company's exchanges which is considered a sales incentive offering that rewards customers solely in return for executing increased trading volumes with the Company.

*Deferred revenue:* As of December 31, 2021, the Company had deferred revenue representing prepaid transaction and non-transaction fees of \$4.0 million related to the collection of prepaid fees from customers participating in the Equity Rights Program V program detailed in Note 7. Deferred revenue is amortized to income over the applicable future periods as fees are earned.

***Income Taxes***

The Company has elected to be treated as a disregarded LLC under the provisions of the Internal Revenue Code. All tax effects of Company's income and loss are passed through to the member. Therefore, no provision or liability for Federal Income Taxes is included in these financial statements. In December 2019, the FASB issued ASU 2019-12, Simplifying the Accounting for Income Taxes, which (a) clarified that an entity is not required to allocate consolidated income taxes to a legal entity that is not subject to tax for purposes of that legal entity's separate financial statements. Similar provisions apply for state and local income tax reporting. Accordingly, no provision for income taxes is provided in the accompanying financial statements.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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**3. NOTES RECEIVABLE, NET**

The notes receivable relate to the consolidated audit trail (“CAT”), which involves the creation of an audit trail to enhance regulators' ability to monitor trading activities in the U.S. markets through a phased implementation. The funding for the development of the CAT is ultimately expected to be provided by the Self-Regulated Organizations (“SROs”), which include the Company, and the industry members. The SROs have presented the SEC with a fee model for charging fees, wherein the industry members will be responsible for 75% of the CAT cost and the SROs would be responsible for remaining 25% of the CAT cost. The funding to date has been provided by the SROs in exchange for promissory notes, which are expected to be repaid once the industry model is approved by the SEC and such industry member fees are collected. Until those fees are collected, the SROs may continue to incur additional significant costs.

The allowance for notes receivable associated with CAT is estimated based on anticipated collections. The following represents the changes in notes receivable and the allowance for notes receivable for the year ended December 31, 2021 (in thousands):

|                                |    |                     |
|--------------------------------|----|---------------------|
| Notes receivable, gross        |    |                     |
| Balance at January 1, 2021     | \$ | 4,654               |
| Additions                      |    | 6,266               |
| Balance at December 31, 2021   |    | <u>10,920</u>       |
| Allowance for notes receivable |    |                     |
| Balance at January 1, 2021     |    | 1,246               |
| Additions                      |    | 1,566               |
| (Write-off) / recoveries       |    | -                   |
| Balance at December 31, 2021   |    | <u>2,812</u>        |
| Notes receivable, net          | \$ | <u><u>8,108</u></u> |

**4. ACCOUNTS PAYABLE AND OTHER LIABILITIES**

The following table presents the components of accounts payable and other liabilities as at December 31, 2021 (in thousands):

|  |    |                      |
|--|----|----------------------|
| Transaction rebates payable            | \$ | 8,313                |
| Section 31 fees payable                |    | 2,476                |
| Accounts payable and others            |    | 2,734                |
| Accounts payable and other liabilities | \$ | <u><u>13,523</u></u> |

**5. RELATED PARTY TRANSACTIONS**

The Company's utilizes assets and incurs certain liabilities that are held at the Parent level. Substantially all expenses of the Company are settled by the Parent and are charged to the Company, at cost, through intercompany charges. Similar results may not be achievable on an arm's length basis.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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The following table presents the Company’s allocation of expenses from the Parent and other affiliated subsidiaries of the Parent for the year ended December 31, 2021 (in thousands):

|  |    |               |
|--|----|---------------|
| Compensation and benefits                      | \$ | 19,672        |
| Information technology and communication costs |    | 17,448        |
| Occupancy costs                                |    | 1,189         |
| Professional fees and outside services         |    | 2,519         |
| Marketing and business development             |    | 986           |
| General, administrative, and other             |    | 2,503         |
| Total operating expenses                       | \$ | <u>44,317</u> |

## 6. COMMITMENTS AND CONTINGENCIES

### *Claims and Litigation*

#### *Nasdaq*

On September 1, 2017, Nasdaq, Inc., filed an action against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC in the U.S. District Court for the District of New Jersey alleging patent infringement and trade secret misappropriation relating to Nasdaq’s electronic trading technology and platforms. MIH subsequently filed six petitions before the Patent Trial and Appeal Board (“PTAB”) at the United States Patent and Trademark Office (“USPTO”) seeking a determination that the subject patent is invalid under the current law. The District Court proceeding was stayed in December 2018, pending resolution of the PTAB proceedings. All claims asserted by Nasdaq against MIH under the six patents at issue were invalidated by the PTAB in 2019 (the “PTAB Final Written Decisions”). On January 27, 2022 the PTAB granted authorization for Nasdaq to file Requests for the USPTO Director to Review the PTAB’s Final Written Decisions, which invalidated the patents asserted against MIAX in litigation (“Review Requests”). On February 28, 2022, Nasdaq filed the Review Requests with the USPTO Director. On June 7, 2022, the PTAB Director denied Nasdaq’s Review Requests of the PTAB Final Written Decisions. On June 21, 2022, Nasdaq waived its right to appeal the PTAB’s Final Written Decisions and the stay in the District Court matter was lifted as all of the PTAB proceedings were concluded with each of the Nasdaq patent claims at issue invalidated.

On August 31, 2021, MIH filed an Answer and Counterclaims in the NJ District Court. MIH’s Answer included denials of the allegations made by Nasdaq in the Complaint and Counterclaims including monopolization antitrust claims, patent misuse, sham litigation, and fraud on the USPTO by Nasdaq. MIH is seeking attorneys’ fees and costs and such other relief as the Court may find to be just and proper. MIH intends to defend its interest in this matter vigorously.

#### *General*

As a self-regulatory organization under the jurisdiction of the SEC, the Company is subject to routine reviews and inspections by the SEC. Management does not believe that the outcome of any of these reviews or inspections will have a material impact on the statement of financial conditions, the statement of income or cash flows of the Company.

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.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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**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, 2021.

***Equity Rights Offering V ("ERP V")***

MIH launched its first Equity Rights Program ("ERP") in September 2013 and subsequently introduced four additional ERPs between February 2015 and September 2020. Each ERP included a certain number of units allowing the Company's customers to obtain common stock warrants in return for a prepaid fee, which is applied to future purchases by the customer of the Company's services. The customer vests in the common stock warrants in tranches over designated time periods based on certain performance criteria, which generally require the customer to execute qualifying trades on the Company's exchanges in an amount equal to a specified fixed percentage of the average daily volume of trades on the applicable exchange.

On September 11, 2020, the Parent closed a fifth equity rights offering with nine firms for 22 L-Units providing for the issuance of warrants to purchase a total of 9,507,586 shares of common stock, representing 432,163 shares per L-Unit. The L-Warrants vest over a 42 month period provided that the participant met the specific performance criteria, which required the participants trade an agreed-upon number of equities contracts, subject to certain exceptions, on PEARL on a daily basis over a specified number of months. 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 L-Unit participant. The warrants expire earliest from (i) September 11, 2027, (ii) or the two year anniversary of a Qualified Public Offering, (iii) or a merger or sale of the Parent. Upon closing, the Company collected \$22 million of prepaid fees from participating member firms. The Company amortized \$7.3 million of prepaid fees during the year ended December 31, 2021, leaving an unamortized balance of \$4.0 million as of December 31, 2021 which is included in deferred transaction revenue in the Company's statement of financial condition.

The shares of common stock and warrants issued under ERP V are classified as equity instruments on the Parent's consolidated balance sheets. The ERP Awards are determined to be consideration payable to a customer and recorded as cost of revenue on the Company's statement of income and changes in member's deficit, based on the grant date fair value of the awards.

**8. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company's financial statements through June 24, 2022, 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.

**MIAX EMERALD, LLC**

Financial Statements

As of and for the year ended December 31, 2021

(with Independent Auditors' Report Thereon)



# MIAX EMERALD, LLC

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KPMG LLP  
345 Park Avenue  
New York, NY 10154-0102

## Independent Auditors' Report

The Board of Directors  
MIAX Emerald, LLC:

### *Opinion*

We have audited the financial statements of MIAX Emerald, LLC (the Company), which comprise the statement of financial condition as of December 31, 2021, and the related statements of income and changes in member's deficit, and cash flows for the year then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021, and the results of its operations and its cash flows for the year then ended in accordance with U.S. generally accepted accounting principles.

### *Basis for Opinion*

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Responsibilities of Management for the Financial Statements*

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

### *Auditors' Responsibilities for the Audit of the Financial Statements*

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.



- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

*KPMG LLP*

New York, New York  
June 24, 2022

**MIAX EMERALD, LLC**  
**Statement of Financial Condition**  
**December 31, 2021 (dollars in thousands)**

---

| <b>Assets</b>                             |                  |
|---|------------------|
| Current assets:                           |                  |
| Cash                                      | \$ 18,960        |
| Accounts receivable                       | 22,197           |
| Other current assets                      | 77               |
| Total current assets                      | <u>41,234</u>    |
| Notes receivable, net                     | 5,168            |
| Other assets                              | 1,312            |
| Total assets                              | <u>\$ 47,714</u> |
| <b>Liabilities And Member's Deficit</b>   |                  |
| Current liabilities:                      |                  |
| Accounts payable and other liabilities    | <u>\$ 19,374</u> |
| Total current liabilities                 | 19,374           |
| Due to Miami International Holdings, Inc. | 37,764           |
| Deferred transaction revenue              | 26               |
| Total liabilities                         | <u>57,164</u>    |
| Commitments and contingencies             | -                |
| Member's deficit:                         |                  |
| Accumulated losses                        | <u>(9,450)</u>   |
| Total member's deficit                    | <u>(9,450)</u>   |
| Total liabilities and member's deficit    | <u>\$ 47,714</u> |

*See accompanying notes to financial statements.*

**MIAX EMERALD, LLC**  
**Statement of Income and Changes in Member's Deficit**  
**Year ended December 31, 2021 (dollars in thousands)**

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|  |                   |
|--|-------------------|
| Revenues:                                      |                   |
| Transaction fees                               | \$ 228,683        |
| Access fees                                    | 19,384            |
| Market data fees                               | 5,975             |
| Other revenue                                  | 116               |
| Total revenues                                 | <u>254,158</u>    |
| Cost of revenues:                              |                   |
| Transaction rebates                            | 216,043           |
| Brokerage and exchange fees                    | 728               |
| Section 31 fees                                | 3,935             |
| Total cost of revenues                         | <u>220,706</u>    |
| Revenues less cost of revenues                 | 33,452            |
| Operating expenses:                            |                   |
| Compensation and benefits                      | 11,590            |
| Information technology and communication costs | 5,808             |
| Occupancy costs                                | 575               |
| Professional fees and outside services         | 2,605             |
| Marketing and business development             | 819               |
| General, administrative, and other             | 1,628             |
| Total operating expenses                       | <u>23,025</u>     |
| Operating income                               | 10,427            |
| Non-operating income:                          |                   |
| Interest income                                | 18                |
| Net profit                                     | <u>10,445</u>     |
| Member's deficit at beginning of year          | (19,895)          |
| Member's deficit at end of year                | <u>\$ (9,450)</u> |

*See accompanying notes to financial statements.*

**MIAX EMERALD, LLC**  
**Statement of Cash Flows**  
**Year ended December 31, 2021 (dollars in thousands)**

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|   |    |                      |
|---|----|----------------------|
| Cash flow from operating activities:  |    |                      |
| Net profit  | \$ | 10,445               |
| Adjustments to reconcile net loss to net cash provided by (used in) operating activities: |    |                      |
| Provision for notes receivable credit losses  |    | 1,149                |
| Changes in operating assets and liabilities:  |    |                      |
| Accounts receivable   |    | (4,464)              |
| Notes receivable  |    | (4,594)              |
| Other assets  |    | 754                  |
| Accounts payable and other liabilities  |    | 4,208                |
| Deferred transaction revenue  |    | <u>26</u>            |
| Net cash provided by operating activities   |    | <u>7,524</u>         |
| Cash flow from financing activities:  |    |                      |
| Due to Miami International Holdings, Inc.   |    | <u>5,821</u>         |
| Net cash provided by financing activities   |    | <u>5,821</u>         |
| Increase in cash and cash equivalents   |    | 13,345               |
| Cash and cash equivalents at beginning of year  |    | <u>5,615</u>         |
| Cash and cash equivalents at end of year  | \$ | <u><u>18,960</u></u> |

*See accompanying notes to financial statements.*

# **MIAX EMERALD, LLC**

## **Notes to Financial Statements**

### **As of and for the Year Ended December 31, 2021**

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#### **1. NATURE OF OPERATIONS**

MIAX Emerald, LLC (“Emerald” or the “Company”), a wholly owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), provides a marketplace for the trading of equity options products for its exchange members.

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

##### ***Basis of Presentation***

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”). The accompanying financial statements for the Company have been prepared from the separate records maintained by the Parent and may not necessarily be indicative of the conditions that would have existed or the results of operations if the Company had been operated as an unaffiliated company. Portions of certain income and expenses represent allocations made from the Parent and other affiliated subsidiaries of the Parent to the Company as disclosed. See Note 5 (“Related Party Transactions”) for more information on related party transactions.

##### ***Use of Estimates***

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

##### ***Change in accounting principles - Consolidated Audit Trail (“CAT”)***

On January 1, 2021, the Company made a voluntary change to its accounting policy related to the treatment of promissory notes issued to the Company by CAT NMS LLC and CAT LLC to fund the ongoing development of CAT as detailed in Note 4 - Notes Receivable, net. Prior to adopting the new policy, the Company had fully expensed these promissory notes upon purchase. Under the new policy adopted during 2021 and applied retroactively to prior periods, the Company is expensing approximately 25% of the CAT notes based upon the expected amount recoverable, subject to SEC approval of industry fee model discussed in Note 3. The change in accounting policy resulted in a \$3.4 million increase to net profit and \$1.7 million decrease to opening member's deficit for the year ended December 31, 2021.

##### ***Change in accounting estimate - Allocation of certain assets and liabilities held at the Parent***

A change in accounting estimate was made during 2021 related to the allocation of assets and liabilities amongst the Parent and its wholly owned subsidiaries. Historically, assets and liabilities held at the Parent, were allocated to the Parent's wholly owned subsidiaries based on management’s estimate of the usage of the specific asset or the estimated benefits received by the Company. During 2021, a legal entity approach was adopted wherein assets and liabilities were presented on the statement of financial conditions of the entity that has the legal right or obligation to the asset and liability. Therefore, for the year ended December 31, 2021, fixed assets, internally developed software, debt obligations and certain accrued liabilities, which are held at the Parent, were not allocated to the Company and as such not presented on the statement of financial condition. This change in accounting estimate was accounted for prospectively beginning January 1, 2021 and there was no impact to the statement of income and member's deficit.

##### ***Cash and Cash Equivalents***

The Company's operations are funded by its Parent through a centralized treasury function. Cash and cash equivalents include cash and amounts due from banks and interest-bearing bank balances. The Company places its cash and cash equivalents with financial institutions and at times, cash held in bank accounts may exceed the Federal Deposit Insurance Corporation insurance limit. The Company monitors its risk of loss associated with such balances and deems the risk of loss to be remote. The carrying values of the Company’s cash and cash equivalents approximates fair value. The Company did not have any restricted cash as of December 31, 2021.

# **MIAX EMERALD, LLC**

## **Notes to Financial Statements**

### **As of and for the Year Ended December 31, 2021**

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#### ***Accounts Receivable***

Accounts receivable are concentrated with the Company's member firms and market data distributors and are primarily collected through the Options Clearing Corporation ("OCC"). Transaction fees are netted against the liquidity payments for each member firm and the balance owed from a member firm is recognized as accounts receivable, net if the amount is to be received and as accounts payable and other liabilities if the amount is owed to the member firm. Management evaluates the Company's accounts receivables periodically and determines an appropriate allowance for uncollectible accounts receivable based on anticipated collections. In circumstances where a specific member firm's inability to meet its financial obligations is probable, the Company records a provision for uncollectible accounts against the member firm's receivable.

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

The majority of the Company's expenditures to date have been funded by the Parent. In certain instances, the Parent's other wholly owned subsidiaries may incur certain expenditure on behalf of the Company. Expenses incurred by the Company are settled on its behalf by the Parent or the Parent's other wholly owned subsidiaries and allocated through intercompany charges and are net settled with the Parent resulting in payables due to Miami International Holdings, Inc. See Note 5 ("Related Party Transactions") for more information on related party transactions.

Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace for the trading of options and cash equities, are primarily attributable to the Company and its affiliates including Miami International Securities Exchange, LLC ("MIAX") and MIAX PEARL, LLC ("PEARL"),. The Company's allocated portion of cost are included in the accompanying statement of income and member's deficit. The Company considers changes in Due to Miami International Holdings, Inc. to be financing activity for purposes of the statements of cash flows.

#### ***Revenue Recognition***

The Company generates revenues by assessing fees to its member firms for the services it renders, which include providing access to the exchange, enabling transaction-based trading on the exchange, and providing access to various market data. Revenue for the Company's services are recognized as control of the services are transferred to the customer. The amount recognized is the amount that reflects the consideration the Company expects to be entitled to in exchange for its services.

The Company determines the transaction price at the outset of the arrangement based on the contractual and payment terms associated with the transaction. The typical term for the Company's contracts with customers ranges from the time it takes to complete a single transaction to one month, depending on the service being provided. Customers are usually billed each month in arrears with standard payment terms, though the Company does occasionally bill customers in advance. Fees associated with each contract are fixed within the month in which the service is provided.

The Company assesses the services promised in the contracts with customers and identifies a performance obligation for each promise to transfer to the customer a service that is distinct—i.e., if such service is separately identifiable and if a customer can benefit from it on its own or with other resources that are readily available to the customer.

*Transaction services:* Transaction services represent the customer's right to be matched on the exchange with a corresponding buyer or seller and to have the transaction executed. Fees are a function of three variables: (1) exchange fee rates; (2) overall industry trading volume; and (3) market share achieved by the exchange platforms. 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 accounted for as consideration payable to a customer and are recorded separately as transaction rebates, which are



# MIAX EMERALD, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2021

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classified within cost of revenues in the accompanying statement of income and changes in member's deficit. In the event that a member firm prepays for transaction fees, revenue is recognized as transaction fees are incurred.

Transaction fees also result in regulatory fees. Regulatory fees include the options regulatory fee ("ORF") and Section 31 fees. ORF is in place to fund the Company's regulatory oversight function of the exchange marketplace and is determined based on the number of customer contracts and cannot be used for non-regulatory purposes. Section 31 fees are transaction fees charged by the SEC to the exchanges. The Section 31 fees charged to customers are based on the fee set by the SEC per notional value of transactions executed on the Company's securities markets and are calculated and billed monthly. The Section 31 fee collected by the Company is ultimately payable to the SEC, and is therefore classified within cost of revenue in the accompanying statement of income and changes in member's deficit.

*Access fees:* Access fees include allowing the customer to connect its network to the Company's exchange for a specified period of time. Fees for these services are assessed to exchange members for the opportunity to trade and use other related functions of the exchanges. Access fees are billed monthly in accordance with the published fee schedule and recognized during the period the service is provided which is generally one month.

*Market data fees:* Market data fees include making market data available to customers either through direct subscriptions or through the Company's participation in U.S. Tape Plans. Market data revenue includes distributions from the U.S. Tape Plans, which is distributed based upon each individual exchange's market share of U.S. volume, trades, and/or quotes. Market data revenue also includes market data revenue earned from the sale of proprietary market data directly to the customer on a subscription basis. Market data revenue is recognized in the period the data is provided.

*Consideration payable to a customer:* As discussed in the Transaction-based services section above, transaction rebates are accounted for as consideration payable to a customer and reduce revenue in the period in which the rebate is earned by the customer and the rebate is provided.

#### ***Income Taxes***

The Company has elected to be treated as a disregarded LLC under the provisions of the Internal Revenue Code. All tax effects of Company's income and loss are passed through to the member. Therefore, no provision or liability for Federal Income Taxes is included in these financial statements. In December 2019, the FASB issued ASU 2019-12, Simplifying the Accounting for Income Taxes, which (a) clarified that an entity is not required to allocate consolidated income taxes to a legal entity that is not subject to tax for purposes of that legal entity's separate financial statements. Similar provisions apply for state and local income tax reporting. Accordingly, no provision for income taxes is provided in the accompanying financial statements.

### **3. NOTES RECEIVABLE, NET**

The notes receivable relate to the consolidated audit trail ("CAT"), which involves the creation of an audit trail to enhance regulators' ability to monitor trading activities in the U.S. markets through a phased implementation. The funding for the development of the CAT is ultimately expected to be provided by the Self-Regulated Organizations ("SROs"), which include the Company, and the industry members. The SROs have presented the SEC with a fee model for charging fees, wherein the industry members will be responsible for 75% of the CAT cost and the SROs would be responsible for remaining 25% of the CAT cost. The funding to date has been provided by the SROs in exchange for promissory notes, which are expected to be repaid once the industry model is approved by the SEC and such industry member fees are collected. Until those fees are collected, the SROs may continue to incur additional significant costs.

The allowance for notes receivable associated with CAT is estimated based on anticipated collections. The following represents the changes in notes receivable and allowance for notes receivable for the year ended December 31, 2021 (in thousands):

**MIAX EMERALD, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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|                                |    |              |
|--------------------------------|----|--------------|
| Notes receivable, gross        |    |              |
| Balance at January 1, 2021     | \$ | 2,338        |
| Additions                      |    | 4,594        |
| Balance at December 31, 2021   |    | <u>6,932</u> |
| Allowance for notes receivable |    |              |
| Balance at January 1, 2021     |    | 615          |
| Additions                      |    | 1,149        |
| (Write-off) / recoveries       |    | -            |
| Balance at December 31, 2021   |    | <u>1,764</u> |
| Notes receivable, net          | \$ | <u>5,168</u> |

**4. ACCOUNTS PAYABLE AND OTHER LIABILITIES**

The following table presents the components of accounts payable and other liabilities as at December 31, 2021 (in thousands):

|  |    |               |
|--|----|---------------|
| Transaction rebates payable            | \$ | 17,277        |
| Section 31 fees payable                |    | 1,056         |
| Accounts payable and other             |    | 1,041         |
| Accounts payable and other liabilities | \$ | <u>19,374</u> |

**5. RELATED PARTY TRANSACTIONS**

The Company's utilizes assets and incurs certain liabilities that are held at the Parent level. Substantially all expenses of the Company are settled by the Parent and are charged to the Company, at cost, through intercompany charges. Similar results may not be achievable on an arm's length basis. The following table presents the Company's allocation of expenses from the Parent and other affiliated subsidiaries of the Parent for the year ended December 31, 2021 (in thousands):

|  |    |               |
|--|----|---------------|
| Compensation and benefits                      | \$ | 11,590        |
| Information technology and communication costs |    | 5,808         |
| Occupancy costs                                |    | 575           |
| Professional fees and outside services         |    | 1,196         |
| Marketing and business development             |    | 819           |
| General, administrative, and other             |    | 1,455         |
| Total operating expenses                       | \$ | <u>21,443</u> |

**MIAX EMERALD, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

---

**6. COMMITMENTS AND CONTINGENCIES**

*Nasdaq*

On September 1, 2017, Nasdaq, Inc., filed an action against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC in the U.S. District Court for the District of New Jersey alleging patent infringement and trade secret misappropriation relating to Nasdaq's electronic trading technology and platforms. MIH subsequently filed six petitions before the Patent Trial and Appeal Board ("PTAB") at the United States Patent and Trademark Office ("USPTO") seeking a determination that the subject patent is invalid under the current law. The District Court proceeding was stayed in December 2018, pending resolution of the PTAB proceedings. All claims asserted by Nasdaq against MIH under the six patents at issue were invalidated by the PTAB in 2019 (the "PTAB Final Written Decisions"). On January 27, 2022 the PTAB granted authorization for Nasdaq to file Requests for the USPTO Director to Review the PTAB's Final Written Decisions, which invalidated the patents asserted against MIAX in litigation ("Review Requests"). On February 28, 2022, Nasdaq filed the Review Requests with the USPTO Director. On June 7, 2022, the PTAB Director denied Nasdaq's Review Requests of the PTAB Final Written Decisions. On June 21, 2022, Nasdaq waived its right to appeal the PTAB's Final Written Decisions and the stay in the District Court matter was lifted as all of the PTAB proceedings were concluded with each of the Nasdaq patent claims at issue invalidated.

On August 31, 2021, MIH filed an Answer and Counterclaims in the NJ District Court. MIH's Answer included denials of the allegations made by Nasdaq in the Complaint and Counterclaims including monopolization antitrust claims, patent misuse, sham litigation, and fraud on the USPTO by Nasdaq. MIH is seeking attorneys' fees and costs and such other relief as the Court may find to be just and proper. MIH intends to defend its interest in this matter vigorously.

*General*

As a self-regulatory organization under the jurisdiction of the SEC, the Company is subject to routine reviews and inspections by the SEC. Management does not believe that the outcome of any of these reviews or inspections will have a material impact on the statement of financial conditions, the statement of income or cash flows of the Company.

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.

**7. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company's financial statements through June 24, 2022, 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.

**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2021

**Miami International Technologies, LLC**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

**Assets**

Current assets:

|                           |    |           |
|---------------------------|----|-----------|
| Cash and cash equivalents | \$ | 51        |
| Accounts receivable       |    | 48        |
| Total current assets      |    | <u>99</u> |
| Total assets              | \$ | <u>99</u> |

**Liabilities and member's deficit**

|   |    |                 |
|---|----|-----------------|
| Due to Miami International Holdings, Inc. | \$ | 15,010          |
| Total liabilities                         |    | <u>15,010</u>   |
| Member's deficit                          |    |                 |
| Accumulated deficit                       |    | (14,911)        |
| Total member's deficit                    |    | <u>(14,911)</u> |
| Total liabilities and member's deficit    | \$ | <u>99</u>       |

**Miami International Technologies, LLC**  
**Statement of Income (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

|  |    |                |
|--|----|----------------|
| Revenues:                                      |    |                |
| Other revenue                                  | \$ | 983            |
| Total revenues                                 |    | <u>983</u>     |
| Operating expenses:                            |    |                |
| Compensation and benefits                      |    | 1,815          |
| Information technology and communication costs |    | 68             |
| Occupancy costs                                |    | 37             |
| Professional fees and outside services         |    | 1,652          |
| General, administrative, and other             |    | <u>27</u>      |
| Total operating expenses                       |    | <u>3,599</u>   |
| Operating loss                                 |    | (2,616)        |
| Net loss                                       | \$ | <u>(2,616)</u> |

**MIAX FUTURES, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2021

**MIAX Futures, LLC**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

|   | <b>Assets</b>                          |                 |
|---|--|-----------------|
| Current assets:                           |  |                 |
| Other assets                              | \$                                     | 1,000           |
| Total assets                              | \$                                     | <u>1,000</u>    |
|   |  |                 |
|   | <b>Liabilities and member's equity</b> |                 |
| Current liabilities:                      |  |                 |
| Accounts payable and other liabilities    | \$                                     | 474             |
| Total current liabilities                 |  | 474             |
| Due to Miami International Holdings, Inc. |  | <u>22,800</u>   |
| Total liabilities                         |  | 23,274          |
| Member's deficit                          |  |                 |
| Accumulated deficit                       |  | <u>(22,274)</u> |
| Total member's deficit                    |  | <u>(22,274)</u> |
| Total liabilities and member's deficit    | \$                                     | <u>1,000</u>    |



**MIAX Futures, LLC**  
**Statement of Income (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

|  |    |                 |
|--|----|-----------------|
| Operating expenses:                            |    |                 |
| Compensation and benefits                      | \$ | 7,124           |
| Information technology and communication costs |    | 510             |
| Occupancy costs                                |    | 200             |
| Professional fees and outside services         |    | 691             |
| Marketing and business development             |    | 8,099           |
| General, administrative, and other             |    | <u>135</u>      |
| Total operating expenses                       |    | <u>16,759</u>   |
| Operating loss                                 |    | <u>(16,759)</u> |
| Net loss                                       | \$ | <u>(16,759)</u> |

**THE BERMUDA STOCK EXCHANGE**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2021

**The Bermuda Stock Exchange**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

| <b>Assets</b>                             |                        |
|---|------------------------|
| Current assets:                           |                        |
| Cash and cash equivalents                 | \$ 1,450               |
| Accounts receivable                       | 164                    |
| Prepaid and other current assets          | <u>105</u>             |
| Total current assets                      | <u>1,719</u>           |
| Fixed assets, net                         | 1,823                  |
| Other assets                              | <u>427</u>             |
| Total assets                              | <u><u>\$ 3,969</u></u> |
| <b>Liabilities and member's equity</b>    |                        |
| Current liabilities:                      |                        |
| Accounts payable and other liabilities    | \$ 648                 |
| Deferred transaction revenue              | <u>818</u>             |
| Total current liabilities                 | 1,466                  |
| Due to Miami International Holdings, Inc. | <u>609</u>             |
| Total liabilities                         | 2,075                  |
| Equity:                                   |                        |
| Share capital and contributed surplus     | 3,981                  |
| Deficit                                   | <u>(2,087)</u>         |
| Total equity                              | <u>1,894</u>           |
| Total liabilities and equity              | <u><u>\$ 3,969</u></u> |

**The Bermuda Stock Exchange**  
**Statement of Income (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

|  |    |                   |
|--|----|-------------------|
| Revenues:                                      |    |                   |
| Transaction fees                               | \$ | 270               |
| Access fees                                    |    | 130               |
| Market data fees                               |    | 107               |
| Other revenue                                  |    | 2,036             |
| Total revenues                                 |    | <u>2,543</u>      |
| Operating expenses:                            |    |                   |
| Compensation and benefits                      |    | 1,257             |
| Information technology and communication costs |    | 219               |
| Depreciation and amortization                  |    | 15                |
| Occupancy costs                                |    | 481               |
| Professional fees and outside services         |    | 351               |
| Marketing and business development             |    | 56                |
| General, administrative, and other             |    | 176               |
| Total operating expense                        |    | <u>2,555</u>      |
| Operating loss                                 |    | (12)              |
| Non-operating income:                          |    |                   |
| Interest income                                |    | 3                 |
| Net loss                                       | \$ | <u><u>(9)</u></u> |

**M402 HOLDINGS, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2021

**M402 Holdings, LLC**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

|                                       | <b>Assets</b>                          |                   |
|---------------------------------------|--|-------------------|
| Investment in subsidiaries            |  | \$ 121,320        |
| Total assets                          |  | <u>\$ 121,320</u> |
|                                       | <b>Liabilities and member's equity</b> |                   |
| Member's equity                       |  |                   |
| Contribution from parent              |  | <u>121,320</u>    |
| Total member's equity                 |  | <u>121,320</u>    |
| Total liabilities and member's equity |  | <u>\$ 121,320</u> |

*There is no income statement activity during the year ended December 31, 2021. Hence the Statement of Income is not presented*

**MINNEAPOLIS GRAIN EXCHANGE, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2021

**Minneapolis Grain Exchange, LLC**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

|   | <b>Assets</b>                          |
|---|--|
| Current assets:                           |  |
| Cash and cash equivalents                 | \$ 11,966                              |
| Accounts receivable                       | 662                                    |
| Restricted cash                           | 6,000                                  |
| Margin and security deposit               | 75,261                                 |
| Other current assets                      | <u>406</u>                             |
| Total current assets                      | <u>94,295</u>                          |
| Fixed assets, net                         | 18,469                                 |
| Other assets                              | <u>241</u>                             |
| Total assets                              | <u>\$ 113,005</u>                      |
|   | <b>Liabilities and member's equity</b> |
| Current liabilities:                      |  |
| Accounts payable and other liabilities    | \$ 2,107                               |
| Margin and security deposit               | <u>75,261</u>                          |
| Total current liabilities                 | 77,368                                 |
| Due to Miami International Holdings, Inc. | <u>6</u>                               |
| Total liabilities                         | 77,374                                 |
| Member's Equity                           |  |
| Total member's equity                     | <u>35,631</u>                          |
| Total liabilities and member's equity     | <u>\$ 113,005</u>                      |



**Minneapolis Grain Exchange, LLC**  
**Statement of Income (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

|  |                 |
|--|-----------------|
| Revenues:                                      |                 |
| Transaction fees                               | \$ 9,302        |
| Market data fees                               | 2,416           |
| Other revenue                                  | <u>5,451</u>    |
| Total revenues                                 | <u>17,169</u>   |
| Cost of Revenue:                               |                 |
| Transaction rebates                            | 839             |
| Brokerage, clearing, and exchange fees         | <u>905</u>      |
| Total cost of revenue                          | <u>1,744</u>    |
| Revenues less cost of revenues                 | 15,425          |
| Operating expenses:                            |                 |
| Compensation and benefits                      | 5,365           |
| Information technology and communication costs | 609             |
| Depreciation and amortization                  | 1,825           |
| Occupancy costs                                | 1,678           |
| Professional fees and outside services         | 406             |
| Marketing and business development             | 61              |
| General, administrative, and other             | <u>1,746</u>    |
| Total operating expense                        | <u>11,690</u>   |
| Operating income                               | 3,735           |
| Non-operating income:                          |                 |
| Interest expense                               | <u>91</u>       |
| Income before income tax provision             | 3,644           |
| Income tax expense                             | <u>(1,610)</u>  |
| Net profit                                     | <u>\$ 2,033</u> |

**COVEXITYSHARES, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2021

**CONVEXITYSHARES, LLC**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2021 (dollars in thousands)**

---

| <b>Assets</b>                               |                      |
|---|----------------------|
| Current assets:                             |                      |
| Cash and cash equivalents                   | \$ 250               |
| Total current assets                        | <u>250</u>           |
| <br>  |                      |
| Total assets                                | <u><u>\$ 250</u></u> |
| <br><b>Liabilities and Member's Deficit</b> |                      |
| Current liabilities:                        |                      |
| Accounts payable and other liabilities      | \$ 8                 |
| Total current liabilities                   | <u>8</u>             |
| <br>  |                      |
| Total liabilities                           | <u><u>8</u></u>      |
| <br>  |                      |
| Member's equity                             |                      |
| Member's contribution                       | 551                  |
| Accumulated losses                          | <u>(309)</u>         |
| Total member's deficit                      | <u>242</u>           |
| Total liabilities and member's deficit      | <u><u>\$ 250</u></u> |

**CONVEXITYSHARES, LLC**  
**Statement of Income (Unaudited)**  
**December 31, 2021**

---

|  |    |       |
|--|----|-------|
| Revenue  | \$ | -     |
| Total revenues                                 |    | -     |
| Cost of revenues                               |    | -     |
| Total cost of revenues                         |    | -     |
| Revenues less cost of revenues                 |    | -     |
| Operating expenses:                            |    |       |
| Information technology and communication costs |    | 6     |
| Professional fees and outside services         |    | 298   |
| General, administrative, and other             |    | 5     |
| Total operating expenses                       |    | 309   |
| Non-operating expense                          |    | -     |
| Net loss                                       | \$ | (309) |

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**

Financial Statements

As of and for the year ended December 31, 2021

(with Independent Auditors' Report Thereon)

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

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KPMG LLP  
345 Park Avenue  
New York, NY 10154-0102

## Independent Auditors' Report

The Board of Directors  
Miami International Securities Exchange, LLC:

### *Opinion*

We have audited the financial statements of Miami International Securities Exchange, LLC (the Company), which comprise the statement of financial condition as of December 31, 2021, and the related statements of income and changes in member's deficit, and cash flows for the year then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021, and the results of its operations and its cash flows for the year then ended in accordance with U.S. generally accepted accounting principles.

### *Basis for Opinion*

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Responsibilities of Management for the Financial Statements*

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

### *Auditors' Responsibilities for the Audit of the Financial Statements*

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.



In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

*KPMG LLP*

New York, New York  
June 24, 2022



**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statement of Financial Condition**  
**December 31, 2021 (dollars in thousands)**

---

| <b>Assets</b>                             |           |
|---|-----------|
| Current assets:                           |           |
| Cash and cash equivalents                 | \$ 57,902 |
| Accounts receivable                       | 14,051    |
| Marketing fee receivable                  | 4,891     |
| Other current assets                      | 1,522     |
| Total current assets                      | 78,366    |
| Fixed assets, net                         | 2,150     |
| Notes receivable, net                     | 7,724     |
| Other assets                              | 1,000     |
| Total assets                              | \$ 89,240 |
| <b>Liabilities and Member's Deficit</b>   |           |
| Current liabilities:                      |           |
| Accounts payable and other liabilities    | 11,994    |
| Marketing fees payable                    | \$ 4,933  |
| Total current liabilities                 | 16,927    |
| Due to Miami International Holdings, Inc. | 193,682   |
| Deferred transaction revenue              | 10        |
| Total liabilities                         | 210,619   |
| Commitments and contingencies             | -         |
| Member's deficit                          |           |
| Accumulated losses                        | (121,379) |
| Total member's deficit                    | (121,379) |
| Total liabilities and member's deficit    | \$ 89,240 |

*See accompanying notes to financial statements.*

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statement of Income and Changes in Member's Deficit**  
**Year ended December 31, 2021 (dollars in thousands)**

---

|  |                     |
|--|---------------------|
| Revenues:                                      |                     |
| Transaction fees                               | \$ 142,637          |
| Access fees                                    | 18,470              |
| Market data fees                               | 7,573               |
| Other revenue                                  | 69                  |
| Total revenues                                 | <u>168,749</u>      |
| Cost of revenues:                              |                     |
| Transaction rebates                            | 80,151              |
| Brokerage and exchange fees                    | 2,165               |
| Section 31 fees                                | 4,085               |
| Other  | 618                 |
| Total cost of revenues                         | <u>87,019</u>       |
| Revenues less cost of revenues                 | 81,730              |
| Operating expenses:                            |                     |
| Compensation and benefits                      | 14,374              |
| Information technology and communication costs | 3,961               |
| Depreciation and amortization                  | 3,627               |
| Occupancy costs                                | 711                 |
| Professional fees and outside services         | 3,354               |
| Marketing and business development             | 1,029               |
| General, administrative, and other             | 4,373               |
| Total operating expenses                       | <u>31,429</u>       |
| Operating income                               | 50,301              |
| Non-operating expense:                         |                     |
| Interest expense, net                          | 428                 |
| Net profit                                     | <u>49,873</u>       |
| Member's deficit at beginning of year          | <u>(171,252)</u>    |
| Member's deficit at end of year                | <u>\$ (121,379)</u> |

*See accompanying notes to financial statements.*

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statement of Cash Flows**  
**Year ended December 31, 2021 (dollars in thousands)**

---

|   |    |                |
|---|----|----------------|
| Cash flow from operating activities:  |    |                |
| Net profit  | \$ | 49,873         |
| Adjustments to reconcile net profit to net cash provided by (used in) operating activities: |    |                |
| Depreciation and amortization   |    | 3,627          |
| Provision for notes receivable credit losses  |    | 1,338          |
| Changes in operating assets and liabilities:  |    |                |
| Accounts receivable   |    | (1,709)        |
| Marketing fees receivable   |    | (1,302)        |
| Notes receivable  |    | (5,350)        |
| Other assets  |    | (644)          |
| Accounts payable and other liabilities  |    | 3,792          |
| Marketing fees payable  |    | 205            |
| Deferred transaction revenue  |    | 10             |
| Net cash provided by operating activities   |    | <u>49,840</u>  |
| Cash flow from financing activities:  |    |                |
| Repayments of capital lease obligation  |    | (3,786)        |
| Due to Miami International Holdings, Inc.   |    | <u>(1,689)</u> |
| Net cash provided by financing activities   |    | <u>(5,475)</u> |
| Increase in cash and cash equivalents   |    | 44,365         |
| Cash and cash equivalents at beginning of year  |    | <u>13,537</u>  |
| Cash and cash equivalents at end of year  | \$ | <u>57,902</u>  |
| Cash paid during the year for interest  | \$ | <u>491</u>     |

*See accompanying notes to financial statements.*

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

As of and for the Year Ended December 31, 2021

---

### 1. NATURE OF OPERATIONS

Miami International Securities Exchange, LLC (“MIAX” or the “Company”) is a wholly owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”) and provides a marketplace for the trading of options products for its exchange members.

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### *Basis of Presentation*

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”). The accompanying financial statements for the Company have been prepared from the separate records maintained by the Parent and may not necessarily be indicative of the conditions that would have existed or the results of operations if the Company had been operated as an unaffiliated company. Portions of certain income and expenses represent allocations made from the Parent and other affiliated subsidiaries of the Parent to the Company as disclosed. See Note 6 (“Related Party Transactions”) for more information on related party transactions.

#### *Use of Estimates*

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

#### *Change in accounting principles - Consolidated Audit Trail (“CAT”)*

On January 1, 2021, the Company made a voluntary change to its accounting policy related to the treatment of promissory notes issued to the Company by CAT NMS LLC and CAT LLC to fund the ongoing development of CAT as detailed in Note 4 - Notes Receivable, net. Prior to adopting the new policy, the Company had fully expensed these promissory notes upon purchase. Under the new policy adopted during 2021 and applied retroactively to prior periods, the Company is expensing approximately 25% of the CAT notes based upon the expected amount recoverable, subject to SEC approval of industry fee model discussed in Note 4. The change in accounting policy resulted in a \$4.0 million increase to net profit and a \$3.7 million decrease to opening member's deficit for the year ended December 31, 2021.

#### *Change in accounting estimate - Allocation of certain assets and liabilities held at the Parent*

A change in accounting estimate was made during 2021 related to the allocation of assets and liabilities amongst the Parent and its wholly owned subsidiaries. Historically, assets and liabilities held at the Parent, were allocated to the Parent's wholly owned subsidiaries based on management’s estimate of the usage of the specific asset or the estimated benefits received by the Company. During 2021, a legal entity approach was adopted wherein assets and liabilities were presented on the statement of financial conditions of the entity that has the legal right or obligation to the asset and liability. Therefore, for the year ended December 31, 2021, fixed assets, internally developed software, debt obligations and certain accrued liabilities, which are held at the Parent, were not allocated to the Company and as such not presented on the statement of financial conditions. This change in accounting estimate was accounted for prospectively beginning January 1, 2021 and there was no impact to the statement of income and member's deficit.

#### *Cash and Cash Equivalents*

The Company's operations are funded by its Parent through a centralized treasury function. Cash and cash equivalents include cash and amounts due from banks and interest-bearing bank balances. The Company places its cash and cash equivalents with financial institutions and at times, cash held in bank accounts may exceed the Federal Deposit Insurance

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2021

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Corporation insurance limit. The Company monitors its risk of loss associated with such balances and deems the risk of loss to be remote. The carrying values of the Company's cash and cash equivalents approximates fair value. The Company did not have any restricted cash as of December 31, 2021.

#### *Accounts Receivable*

Accounts receivable are concentrated with the Company's member firms and market data distributors and are primarily collected through the Options Clearing Corporation ("OCC"). Transaction fees are netted against the liquidity payments for each member firm and the balance owed from a member firm is recognized as accounts receivable, net if the amount is to be received and as accounts payable and other liabilities if the amount is owed to the member firm. Management evaluates the Company's accounts receivables periodically and determines an appropriate allowance for uncollectible accounts receivable based on anticipated collections. In circumstances where a specific member firm's inability to meet its financial obligations is probable, the Company records a provision for uncollectible accounts against the member firm's receivable.

#### *Fixed Assets, Net*

Fixed assets are stated at cost, net of accumulated depreciation. As all fixed assets are acquired under capital leases, and depreciation is computed on a straight-line basis over the life of the lease, ranging from one to three years. The estimated useful life of the fixed assets ranges from three to five years.

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

The majority of the Company's expenditures to date have been funded by the Parent. In certain instances, the Parent's other wholly owned subsidiaries may incur certain expenditure on behalf of the Company. Expenses incurred by the Company are settled on its behalf by the Parent or the Parent's other wholly-owned subsidiaries and allocated through intercompany charges and are net settled with the Parent resulting in payables due to Miami International Holdings, Inc. See Note 6 ("Related Party Transactions") for more information on related party transactions.

Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace for the trading of options and cash equities, are primarily attributable to the Company and its affiliates including MIAX Emerald, LLC ("Emerald") and MIAX PEARL, LLC ("PEARL"). The Company's allocated portion of cost are included in the accompanying statements of income and member's deficit. The Company considers changes in Due to Miami International Holdings, Inc., to be financing activity for purposes of the statements of cash flows.

#### *Revenue Recognition*

The Company generates revenues by assessing fees to its member firms for the services it renders, which include providing access to its exchanges, enabling transaction-based trading on its exchange, and providing access to various market data. Revenue for the Company's services are recognized as control of the services are transferred to the customer. The amount recognized is the amount that reflects the consideration the Company expects to be entitled to in exchange for its services.

The Company determines the transaction price at the outset of the arrangement based on the contractual and payment terms associated with the transaction. The typical term for the Company's contracts with customers ranges from the time it takes to complete a single transaction to one month, depending on the service being provided. Customers are usually billed each month in arrears with standard payment terms, though the Company does occasionally bill customers in advance. Fees associated with each contract are fixed within the month in which the service is provided.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2021

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The Company assesses the services promised in the contracts with customers and identifies a performance obligation for each promise to transfer to the customer a service that is distinct—i.e., if such service is separately identifiable and if a customer can benefit from it on its own or with other resources that are readily available to the customer.

*Transaction services:* Transaction services represent the customer's right to be matched on the exchange with a corresponding buyer or seller and to have the transaction executed. Fees are a function of three variables: (1) exchange fee rates; (2) overall industry trading volume; and (3) market share achieved by the exchange platforms. 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 accounted for as consideration payable to a customer and are recorded separately as transaction rebates, which are classified within cost of revenue in the accompanying statement of income and changes in member's deficit. In the event that a member firm prepays for transaction fees, revenue is recognized as transaction fees are incurred.

Transaction fees also result in regulatory fees. Regulatory fees include the options regulatory fee ("ORF") and Section 31 fees. ORF is in place to fund the Company's regulatory oversight function of the exchange marketplace and is determined based on the number of customer contracts and cannot be used for non-regulatory purposes. Section 31 fees are transaction fees charged by the SEC to the exchanges. The Section 31 fees charged to customers are based on the fee set by the SEC per notional value of transactions executed on the Company's securities markets and are calculated and billed monthly. The Section 31 fee collected by the Company is ultimately payable to the SEC, and is therefore classified within cost of revenue in the accompanying statement of income and changes in member's deficit...

*Access fees:* Access fees include allowing the customer to connect its network to the Company's exchange for a specified period of time. Fees for these services are assessed to exchange members for the opportunity to trade and use other related functions of the exchanges. Access fees are billed monthly in accordance with the published fee schedule and recognized during the period the service is provided which is generally one month.

*Market data fees:* Market data fees include making market data available to customers either through direct subscriptions or through the Company's participation in U.S. Tape Plans. Market data revenue includes distributions from the U.S. Tape Plans, which is distributed based upon each individual exchange's market share of U.S. volume, trades, and/or quotes. Market data revenue also includes market data revenue earned from the sale of proprietary market data directly to the customer on a subscription basis. Market data revenue is recognized in the period the data is provided.

*Consideration payable to a customer:* As discussed in the Transaction-based services section above, transaction rebates are accounted for as consideration payable to a customer and reduce revenue in the period in which the rebate is earned by the customer and the rebate is provided.

#### ***Income Taxes***

The Company has elected to be treated as a disregarded LLC under the provisions of the Internal Revenue Code. All tax effects of Company's income and loss are passed through to the member. Therefore, no provision or liability for Federal Income Taxes is included in these financial statements. In December 2019, the FASB issued ASU 2019-12, Simplifying the Accounting for Income Taxes, which (a) clarified that an entity is not required to allocate consolidated income taxes to a legal entity that is not subject to tax for purposes of that legal entity's separate financial statements. Similar provisions apply for state and local income tax reporting. Accordingly, no provision for income taxes is provided in the accompanying financial statements.

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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**3. FIXED ASSETS, NET**

As of December 31, 2021, the total cost of fixed assets, consisting primarily of computer hardware that supports exchange operations, was \$40.5 million, with related accumulated depreciation of \$38.3 million. Depreciation expense was \$3.6 million for the year ended December 31, 2021.

**4. NOTES RECEIVABLE, NET**

The notes receivable relate to the consolidated audit trail (“CAT”), which involves the creation of an audit trail to enhance regulators' ability to monitor trading activities in the U.S. markets through a phased implementation. The funding for the development of the CAT is ultimately expected to be provided by the Self-Regulated Organizations (“SROs”), which include the Company, and the industry members. The SROs have presented the SEC with a fee model for charging fees, wherein the industry members will be responsible for 75% of the CAT cost and the SROs would be responsible for remaining 25% of the CAT cost. The funding to date has been provided by the SROs in exchange for promissory notes, which are expected to be repaid once the industry model is approved by the SEC and such industry member fees are collected. Until those fees are collected, the SROs may continue to incur additional significant costs.

The allowance for notes receivable associated with CAT is estimated based on anticipated collections. The following represents the changes in notes receivable and the allowance for notes receivable for the year ended December 31, 2021 (in thousands):

|                                |    |                     |
|--------------------------------|----|---------------------|
| Notes receivable, gross        |    |                     |
| Balance at January 1, 2021     | \$ | 5,091               |
| Additions                      |    | 5,351               |
| Balance at December 31, 2021   |    | <u>10,442</u>       |
| Allowance for notes receivable |    |                     |
| Balance at January 1, 2021     |    | 1,380               |
| Additions                      |    | 1,338               |
| (Write-off) / recoveries       |    | -                   |
| Balance at December 31, 2021   |    | <u>2,718</u>        |
| Notes receivable, net          | \$ | <u><u>7,724</u></u> |

**5. ACCOUNTS PAYABLE AND OTHER LIABILITIES**

The following table presents the components of accounts payable and other liabilities as at December 31, 2021 (in thousands):

|  |    |                      |
|--|----|----------------------|
| Transaction rebates payable            | \$ | 4,495                |
| Current portion of lease obligation    |    | 2,431                |
| Section 31 fees payable                |    | 1,085                |
| Accounts payable and other             |    | 3,983                |
| Accounts payable and other liabilities | \$ | <u><u>11,994</u></u> |

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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**6. RELATED PARTY TRANSACTIONS**

The Company's utilizes assets and incurs certain liabilities that are held at the Parent level. Substantially all expenses of the Company are settled by the Parent and are charged to the Company, at cost, through intercompany charges. Similar results may not be achievable on an arm's length basis. The following table presents the Company's allocation of expenses from the Parent and other affiliated subsidiaries of the Parent for the year ended December 31, 2021 (in thousands):

|  |    |        |
|--|----|--------|
| Compensation and benefits                      | \$ | 14,374 |
| Information technology and communication costs |    | 3,961  |
| Occupancy costs                                |    | 711    |
| Professional fees and outside services         |    | 1,771  |
| Marketing and business development             |    | 994    |
| General, administrative, and other             |    | 2,811  |
| Total operating expenses                       | \$ | 24,622 |

**7. COMMITMENTS AND CONTINGENCIES**

***Claims and Litigation***

*Nasdaq*

On September 1, 2017, Nasdaq, Inc., filed an action against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC in the U.S. District Court for the District of New Jersey alleging patent infringement and trade secret misappropriation relating to Nasdaq's electronic trading technology and platforms. MIH subsequently filed six petitions before the Patent Trial and Appeal Board ("PTAB") at the United States Patent and Trademark Office ("USPTO") seeking a determination that the subject patent is invalid under the current law. The District Court proceeding was stayed in December 2018, pending resolution of the PTAB proceedings. All claims asserted by Nasdaq against MIH under the six patents at issue were invalidated by the PTAB in 2019 (the "PTAB Final Written Decisions"). On January 27, 2022 the PTAB granted authorization for Nasdaq to file Requests for the USPTO Director to Review the PTAB's Final Written Decisions, which invalidated the patents asserted against MIAX in litigation ("Review Requests"). On February 28, 2022, Nasdaq filed the Review Requests with the USPTO Director. On June 7, 2022, the PTAB Director denied Nasdaq's Review Requests of the PTAB Final Written Decisions. On June 21, 2022, Nasdaq waived its right to appeal the PTAB's Final Written Decisions and the stay in the District Court matter was lifted as all of the PTAB proceedings were concluded with each of the Nasdaq patent claims at issue invalidated.

On August 31, 2021, MIH filed an Answer and Counterclaims in the NJ District Court. MIH's Answer included denials of the allegations made by Nasdaq in the Complaint and Counterclaims including monopolization antitrust claims, patent misuse, sham litigation, and fraud on the USPTO by Nasdaq. MIH is seeking attorneys' fees and costs and such other relief as the Court may find to be just and proper. MIH intends to defend its interest in this matter vigorously.



**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2021**

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*General*

As a self-regulatory organization under the jurisdiction of the SEC, the Company is subject to routine reviews and inspections by the SEC. Management does not believe that the outcome of any of these reviews or inspections will have a material impact on the statement of financial conditions, the statement of income or cash flows of the Company.

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.

**8. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company's financial statements through June 24, 2022, 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.

**ABN AMRO CLEARING CHICAGO LLC**

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

Approval Date: 3/7/2013  
**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

**APEX CLEARING CORPORATION**

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

Approval Date: 11/18/2015  
**Membership Activities:**  
 Clearance  
 International Tele #

SEC #: 8-23522  
 CRD #: 13071

**AXOS CLEARING LLC**

15950 West Dodge Road - Suite 300  
 Omaha NE 68118  
 Tele #: (402) 384-6100

Approval Date: 4/11/2022  
**Membership Activities:**  
 Clearance  
 International Tele #

SEC #: 8-53595  
 CRD #: 117176

**BARCLAYS CAPITAL INC.**

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

Approval Date: 12/7/2012  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-41342  
 CRD #: 19714

**BMO CAPITAL MARKETS CORP.**

151 W. 42nd Street, 9th Floor  
 New York NY 10036  
 Tele #: (212) 885-4000

Approval Date: 10/10/2014  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-34344  
 CRD #: 16686

**BNP PARIBAS SECURITIES CORP.**

787 Seventh Avenue  
 New York NY 10019  
 Tele #: (212) 841-2000

Approval Date: 4/21/2014  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8-32682  
 CRD #: 15794

**BOFA SECURITIES, INC.**

One Bryant Park  
 New York NY 10036  
 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: 12/7/2012  
**Membership Activities:**  
 Primary Lead, Lead, Registered Market Maker & Order Entry  
 International Tele #

SEC #: 8-53574  
 CRD #: 116797

**CITIGROUP GLOBAL MARKETS INC.**

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

Approval Date: 5/1/2019

SEC #: 8-8177

**Membership Activities:**

CRD #: 7059

Order Entry &amp; Clearance

International Tele #

**CREDIT SUISSE SECURITIES (USA) LLC**

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

Approval Date: 12/7/2012

SEC #: 8-00422

**Membership Activities:**

CRD #: 816

Order Entry &amp; Clearance

International Tele #

**CUTLER GROUP, LP**

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

Approval Date: 11/2/2015

SEC #: 8-42415

**Membership Activities:**

CRD #: 31730

Registered Market Maker

International Tele #

**DASH FINANCIAL TECHNOLOGIES LLC**

311 S. Wacker Drive, Ste. 1000  
 Chicago IL 60606  
 Tele #: (312) 986-2006

Approval Date: 12/7/2012

SEC #: 8-52503

**Membership Activities:**

CRD #: 104031

Order Entry &amp; Clearance

International Tele #

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

540 West Madison, Ste. 2500  
 Chicago IL 60661  
 Tele #: (312) 542-1000

Approval Date: 8/31/2015

SEC #: 8-51241

**Membership Activities:**

CRD #: 45908

Order Entry

International Tele #

**GLOBAL EXECUTION BROKERS, LP**

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

Approval Date: 12/7/2012

SEC #: 8-65878

**Membership Activities:**

CRD #: 126407

Order Entry

International Tele #

**GOLDMAN SACHS & CO. LLC**

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

Approval Date: 1/15/2013

SEC #: 8-129

**Membership Activities:**

CRD #: 361

Order Entry &amp; Clearance

International Tele #

**GROUP ONE TRADING LP**

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

Approval Date: 10/20/2014

SEC #: 8-47762

**Membership Activities:**

CRD #: 37484

Primary Lead, Lead, Registered Market Maker &amp; Order Entry

International Tele #

**GTS SECURITIES LLC**

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

Approval Date: 2/25/2020

SEC #: 8-68126

**Membership Activities:**

CRD #: 149224

Primary Lead, Lead &amp; Registered Market Maker

International Tele #

**HRT FINANCIAL LP**

175 Greenwich Street - 76th Floor  
3 World Trade Center  
New York NY 10007  
Tele #: (212) 293-1444

Approval Date: 3/29/2017

SEC #: 8-68430

**Membership Activities:**

CRD #: 152144

Registered Market Maker & Order Entry  
International Tele #

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

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

Approval Date: 8/26/2014

SEC #: 8-52600

**Membership Activities:**

CRD #: 104143

Primary Lead, Lead & Registered Market Maker  
International Tele #

**INSTINET, LLC**

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

Approval Date: 3/27/2013

SEC #: 8-23669

**Membership Activities:**

CRD #: 7897

Order Entry & Clearance  
International Tele #

**INTERACTIVE BROKERS LLC**

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

Approval Date: 12/7/2012

SEC #: 8-47257

**Membership Activities:**

CRD #: 36418

Order Entry & Clearance  
International Tele #

**J.P. MORGAN SECURITIES LLC**

383 Madison Avenue  
New York NY 10179  
Tele #: (212) 272-2000

Approval Date: 12/7/2012

SEC #: 8-35008

**Membership Activities:**

CRD #: 79

Order Entry & Clearance  
International Tele #

**JANE STREET CAPITAL, LLC**

250 Vesey Street - 5th Floor  
New York NY 10281  
Tele #: (646) 759-6000

Approval Date: 4/2/2018

SEC #: 8-52275

**Membership Activities:**

CRD #: 103782

Order Entry

International Tele #

**JANE STREET OPTIONS, LLC**

250 Vesey Street - 5th Floor  
New York NY 10281  
Tele #: (646) 759-6000

Approval Date: 4/2/2018

SEC #: 8-66813

**Membership Activities:**

CRD #: 134159

Registered Market Maker & Order Entry  
International Tele #

**JEFFERIES LLC**

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

Approval Date: 9/15/2014

SEC #: 8-15074

**Membership Activities:**

CRD #: 2347

Order Entry & Clearance  
International Tele #

**JUMP TRADING, LLC**

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

Approval Date: 12/9/2019

SEC #: 8-52989

**Membership Activities:**

CRD #: 106124

Registered Market Maker  
International Tele #

**MATRIX EXECUTIONS, LLC**

135 S. LaSalle Street, Ste. 3900

Chicago IL 60603

Tele #: (312) 334-8000

Approval Date: 12/7/2012

SEC #: 8-48255

**Membership Activities:**

CRD #: 38455

Order Entry

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: 12/7/2012

SEC #: 8-33359

**Membership Activities:**

CRD #: 16139

Clearance

International Tele #

**MORGAN STANLEY & CO. LLC**

1585 Broadway

New York NY 10036

Tele #: (212) 761-4000

Approval Date: 12/7/2012

SEC #: 8-15869

**Membership Activities:**

CRD #: 8209

All Market Maker &amp; Electronic Exchange Options Memberships

International Tele #

**OPTIVER US LLC**

130 E. Randolph Street, Ste. 1300

Chicago IL 60601

Tele #: (312) 821-9500

Approval Date: 1/27/2015

SEC #: 8-66083

**Membership Activities:**

CRD #: 128030

Primary Lead, Lead &amp; Registered Market Maker

International Tele #

**PEAK6 CAPITAL MANAGEMENT LLC**

141 W. Jackson Blvd., Ste. 500

Chicago IL 60604

Tele #: (312) 444-8000

Approval Date: 7/22/2015

SEC #: 8-8-50422

**Membership Activities:**

CRD #: 43773

Order Entry

International Tele #

**PERSHING LLC**

One Pershing Plaza - 10th Fl.

Jersey City NJ 07399

Tele #: (201) 413-2000

Approval Date: 3/12/2013

SEC #: 8-17574

**Membership Activities:**

CRD #: 7560

Order Entry &amp; Clearance

International Tele #

**RQD\* CLEARING, LLC**

425 South Financial Place - Suite 910B

Chicago IL 60605

Tele #: (312) 692-5000

Approval Date: 12/7/2012

SEC #: 8-66826

**Membership Activities:**

CRD #: 134284

Order Entry &amp; Clearance

International Tele #

**SIMPLEX TRADING, LLC**

230 So. LaSalle St., Ste. 4-100

Chicago IL 60604

Tele #: (312) 360-2440

Approval Date: 9/20/2013

SEC #: 8-68556

**Membership Activities:**

CRD #: 153585

Order Entry

International Tele #

**SUSQUEHANNA INVESTMENT GROUP**

401 City Avenue, Ste. 220

Bala Cynwyd PA 19004

Tele #: (610) 617-2600

Approval Date: 11/23/2016

SEC #: 8-37520

**Membership Activities:**

CRD #: 33875

Registered Market Maker

International Tele #

**SUSQUEHANNA SECURITIES, LLC**

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

Approval Date: 12/7/2012

SEC #: 8-47034

**Membership Activities:**

CRD #: 35874

Primary Lead, Lead & Registered Market Maker  
International Tele #

**TWO SIGMA SECURITIES, LLC**

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

Approval Date: 9/12/2017

SEC #: 8-68090

**Membership Activities:**

CRD #: 148960

Primary Lead, Lead & Registered Market Maker  
International Tele #

**UBS SECURITIES LLC**

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

Approval Date: 12/7/2012

SEC #: 8-22651

**Membership Activities:**

CRD #: 7654

Order Entry & Clearance  
International Tele #

**WALLEYE TRADING LLC**

2800 Niagara Lane North, Ste. 102  
Plymouth MN 55447  
Tele #: (952) 345-6611

Approval Date: 5/13/2015

SEC #: 8-66988

**Membership Activities:**

CRD #: 136196

Registered Market Maker & Order Entry  
International Tele #

**WEDBUSH SECURITIES INC.**

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

Approval Date: 12/7/2012

SEC #: 8-12987

**Membership Activities:**

CRD #: 877

Clearance  
International Tele #

**WELLS FARGO SECURITIES, LLC**

550 South Tryon Street - 6th Floor  
D1086-060  
Charlotte NC 28202  
Tele #: (704) 410-1913

Approval Date: 4/11/2014

SEC #: 8-65876

**Membership Activities:**

CRD #: 126292

Order Entry & Clearance  
International Tele #

**WOLVERINE EXECUTION SERVICES, LLC**

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

Approval Date: 12/7/2012

SEC #: 8-65336

**Membership Activities:**

CRD #: 120719

Order Entry & Clearance  
International Tele #

**WOLVERINE TRADING, LLC**

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

Approval Date: 12/7/2012

SEC #: 8-47484

**Membership Activities:**

CRD #: 36848

Primary Lead, Lead & Registered Market Maker  
International Tele #

**X-CHANGE FINANCIAL ACCESS, LLC**

440 So. LaSalle Street, Suite 2900  
Chicago IL 60605  
Tele #: (312) 235-0320

Approval Date: 11/28/2018

SEC #: 8-65860

**Membership Activities:**

CRD #: 126201

Order Entry & Clearance  
International Tele #

Total BD Firms 45

| MIAX Options Securities as of 6/17/22      |        |                 |
|--|--------|-----------------|
| Company Name                               | Symbol | Instrument Type |
| AGILENT TECHNOLOGIES INC.                  | A      | Equity          |
| ALCOA Corporation                          | AA     | Equity          |
| Arlington Asset Investment Corporation     | AAIC   | Equity          |
| AMERICAN AIRLINES GROUP INC.               | AAL    | Equity          |
| Aarons Holdings Company, Inc.              | AAN    | Equity          |
| APPLIED OPTOELECTRONICS, INC.              | AAOI   | Equity          |
| AAON INC                                   | AAON   | Equity          |
| ADVANCE AUTO PARTS INC.                    | AAP    | Equity          |
| APPLE INC.                                 | AAPL   | Equity          |
| Atlas Air Worldwide Holdings, Inc.         | AAWW   | Equity          |
| iShares MSCI All Country Asia ex Japan ETF | AAXJ   | ETF             |
| AllianceBernstein Holding L.P.             | AB     | Equity          |
| ABB LTD-SPON ADR                           | ABB    | Equity          |
| ABBVIE INC.                                | ABBV   | Equity          |
| AMERISOURCEBERGEN, CORP.                   | ABC    | Equity          |
| Ameris Bancorp                             | ABCB   | Equity          |
| ABCELLERA BIOLOGICS, INC.                  | ABCL   | Equity          |
| Abeona Therapeutics Inc.                   | ABEO   | Equity          |
| AMBEV S.A.                                 | ABEV   | Equity          |
| ASBURY AUTOMOTIVE GROUP INCCOM             | ABG    | Equity          |
| ARCA BIOPHARMA, INC.                       | ABIO   | Equity          |
| ABM INDUSTRIES INCORPORATED                | ABM    | Equity          |
| ABIOMED INC                                | ABMD   | Equity          |
| Airbnb, Inc.                               | ABNB   | Equity          |
| Arbor Realty Trust, Inc.                   | ABR    | Equity          |
| ABSCI CORPORATION                          | ABSI   | Equity          |
| ABSOLUTE SOFTWARE CORP                     | ABST   | Equity          |
| ABBOTT LABORATORIES                        | ABT    | Equity          |
| Arbutus Biopharma Corporation              | ABUS   | Equity          |
| ACADIA PHARMACEUTICALS INC.                | ACAD   | Equity          |
| Aurora Cannabis Inc.                       | ACB    | Equity          |
| AMERICAN CAMPUS COMMUNITIES , INC          | ACC    | Equity          |
| ACCOLADE INC                               | ACCD   | Equity          |
| ACCO Brands Corp                           | ACCO   | Equity          |
| ACCEL ENTERTAINMENT, INC.                  | ACEL   | Equity          |
| ACER THERAPEUTICS INC.                     | ACER   | Equity          |
| ADICET BIO INC                             | ACET   | Equity          |
| ACE CONVERGENCE ACQUISITION CORP           | ACEV   | Equity          |
| ARCH CAPITAL GROUP Ltd                     | ACGL   | Equity          |
| Aluminum Corporation of China Limited      | ACH    | Equity          |
| Acadia Healthcare Co Inc                   | ACHC   | Equity          |
| Archer Aviation Inc.                       | ACHR   | Equity          |
| ACHIEVE LIFE SCIENCES, INC.                | ACHV   | Equity          |
| ALBERTSONS COMPANIES, INC.                 | ACI    | Equity          |
| AC IMMUNE SA                               | ACIU   | Equity          |

| MIAX Options Securities as of 6/17/22           |        |                 |
|---|--------|-----------------|
| Company Name                                    | Symbol | Instrument Type |
| ACI Worldwide, Inc.                             | ACIW   | Equity          |
| Axcelis Technologies Inc.                       | ACLS   | Equity          |
| Aecom Technology Corporation                    | ACM    | Equity          |
| ACM Research, Inc.                              | ACMR   | Equity          |
| ACCENTURE PLC                                   | ACN    | Equity          |
| Acorda Therapeutics, Inc.                       | ACOR   | Equity          |
| ACRES Commercial Realty Corp.                   | ACR    | Equity          |
| Ares Commercial Real Estate Corporation         | ACRE   | Equity          |
| Aclaris Therapeutics, Inc.                      | ACRS   | Equity          |
| AcelRx Pharmaceuticals Inc                      | ACRX   | Equity          |
| ACACIA RESEARCH CORPORATION                     | ACTG   | Equity          |
| ACV AUCTIONS INC                                | ACVA   | Equity          |
| iShares MSCI ACWI Index Fund                    | ACWI   | ETF             |
| Adaptimmune Therapeutics PLC                    | ADAP   | Equity          |
| ADOBE SYSTEMS INC.                              | ADBE   | Equity          |
| ADVANCED EMISSIONS SOLUTIONS, INC.              | ADES   | Equity          |
| ADAGIO THERAPEUTICS, INC.                       | ADGI   | Equity          |
| ANALOG DEVICES INC                              | ADI    | Equity          |
| ADIAL PHARMACEUTICALS, INC                      | ADIL   | Equity          |
| ARCHER DANIELS MIDLAND COMPANY                  | ADM    | Equity          |
| ADMA Biologics Inc                              | ADMA   | Equity          |
| Adamis Pharmaceuticals Corporation              | ADMP   | Equity          |
| Advent Technologies Holdings, Inc.              | ADN    | Equity          |
| Adient plc                                      | ADNT   | Equity          |
| AUTOMATIC DATA PROCESSING INC                   | ADP    | Equity          |
| Adaptive Biotechnologies Corp                   | ADPT   | Equity          |
| AUTODESK, INC.                                  | ADSK   | Equity          |
| ADT Inc.  | ADT    | Equity          |
| ADTRAN, INC.                                    | ADTN   | Equity          |
| ADITX THERAPEUTICS, INC.                        | ADTX   | Equity          |
| Addus HomeCare Corporation                      | ADUS   | Equity          |
| Advantage Solutions Inc.                        | ADV    | Equity          |
| Adverum Biotechnologies, Inc.                   | ADVM   | Equity          |
| AMEREN CORPORATION                              | AEE    | Equity          |
| AEGON N.V.                                      | AEG    | Equity          |
| AEHR TEST SYSTEMS                               | AEHR   | Equity          |
| Advanced Energy Industries, Inc.                | AEIS   | Equity          |
| AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY | AEL    | Equity          |
| AGNICO-EAGLE MINES LTD.                         | AEM    | Equity          |
| AETHLON MEDICAL, INC.                           | AEMD   | Equity          |
| AMERICAN EAGLE OUTFITTERS, INC.                 | AEO    | Equity          |
| AMERICAN ELECTRIC POWER COMPANY, INC.           | AEP    | Equity          |
| AerCap Holdings NV                              | AER    | Equity          |
| Aerie Pharmaceuticals, Inc.                     | AERI   | Equity          |
| AES CORP.                                       | AES    | Equity          |



| MIAX Options Securities as of 6/17/22       |        |                 |
|---|--------|-----------------|
| Company Name                                | Symbol | Instrument Type |
| Aeva Technologies, Inc.                     | AEVA   | Equity          |
| AMERICAN FINANCIAL GROUP                    | AFG    | Equity          |
| ACUTUS MEDICAL INC                          | AFIB   | Equity          |
| AFLAC INC.                                  | AFL    | Equity          |
| Affimed N.V.                                | AFMD   | Equity          |
| AFFIRM HOLDINGS, INC.                       | AFRM   | Equity          |
| CSOP FTSE China A50 ETF                     | AFTY   | ETF             |
| First Majestic Silver Corp                  | AG     | Equity          |
| ALTIMETER GROWTH CORP                       | AGCB   | Equity          |
| AGCO CORPORATION                            | AGCO   | Equity          |
| Agenus Inc.                                 | AGEN   | Equity          |
| AGRIFY CORP.                                | AGFY   | Equity          |
| iShares Core U.S. Aggregate Bond ETF        | AGG    | ETF             |
| ALAMOS GOLD INC                             | AGI    | Equity          |
| Agios Pharmaceuticals Inc                   | AGIO   | Equity          |
| AGILON HEALTH INC                           | AGL    | Equity          |
| Federal Agricultural Mortgage Corp. (CI C)  | AGM    | Equity          |
| AGNC Investment Corp.                       | AGNC   | Equity          |
| ASSURED GUARANTY LTD.                       | AGO    | Equity          |
| PROSHARES ULTRA SILVER                      | AGQ    | ETF             |
| AdecoAgro S.A.                              | AGRO   | Equity          |
| PLAYAGS INC                                 | AGS    | Equity          |
| Applied Genetic Technologies Corp           | AGTC   | Equity          |
| Argan Inc                                   | AGX    | Equity          |
| ADAPTHEALTH CORP.                           | AHCO   | Equity          |
| Armada Hoffer Properties, Inc.              | AHH    | Equity          |
| Ashford Hospitality Trust, Inc.             | AHT    | Equity          |
| C3.ai, Inc.                                 | AI     | Equity          |
| AMERICAN INTERNATIONAL GROUP, INC.          | AIG    | Equity          |
| Apollo Investment Corporation               | AINV   | Equity          |
| AAR Corp.                                   | AIR    | Equity          |
| APARTMENT INCOME REIT CORP                  | AIRC   | Equity          |
| Airgain Inc                                 | AIRG   | Equity          |
| Apartment Investment and Management Company | AIV    | Equity          |
| Assurant Inc.                               | AIZ    | Equity          |
| ARTHUR J. GALLAGHER & CO.                   | AJG    | Equity          |
| Aerojet Rocketdyne Holdings, Inc.           | AJRD   | Equity          |
| AKAMAI TECHNOLOGIES, INC.                   | AKAM   | Equity          |
| Akebia Therapeutics, Inc.                   | AKBA   | Equity          |
| AKERO THERAPEUTICS, INC.                    | AKRO   | Equity          |
| AKOUSTIS TECHNOLOGIES, INC                  | AKTS   | Equity          |
| AKOUOS INC                                  | AKUS   | Equity          |
| Air Lease Corp                              | AL     | Equity          |
| Albemarle Corporation                       | ALB    | Equity          |
| Albireo Pharma, Inc                         | ALBO   | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| ALCON INC                             | ALC    | Equity          |
| ALDEYRA THERAPEUTICS, INC.            | ALDX   | Equity          |
| ALECTOR INC.                          | ALEC   | Equity          |
| ALLEGRO MICROSYSTEMS, INC.            | ALGM   | Equity          |
| ALIGN TECHNOLOGY INC.                 | ALGN   | Equity          |
| Allegiant Travel Company              | ALGT   | Equity          |
| Alight, Inc.                          | ALIT   | Equity          |
| ALASKA AIR GROUP INC                  | ALK    | Equity          |
| ALKERMES PLC                          | ALKS   | Equity          |
| THE ALLSTATE CORPORATION              | ALL    | Equity          |
| ALLEGION PLC                          | ALLE   | Equity          |
| Allakos Inc                           | ALLK   | Equity          |
| Allogene Therapeutics, Inc.           | ALLO   | Equity          |
| Allot Communications Ltd              | ALLT   | Equity          |
| ALLY FINANCIAL INC.                   | ALLY   | Equity          |
| ALNYLAM PHARMACEUTICALS INC           | ALNY   | Equity          |
| ALPINE IMMUNE SCIENCES, INC.          | ALPN   | Equity          |
| ALPINE 4 HOLDINGS, INC.               | ALPP   | Equity          |
| Alarm.Com Holdings, Inc.              | ALRM   | Equity          |
| Allison Transmission Holdings, Inc.   | ALSN   | Equity          |
| Altimune, Inc.                        | ALT    | Equity          |
| Alto Ingredients, Inc.                | ALTO   | Equity          |
| Autoliv, Inc                          | ALV    | Equity          |
| ALLOVIR INC                           | ALVR   | Equity          |
| ALX ONCOLOGY HOLDINGS INC             | ALXO   | Equity          |
| Antero Midstream Partners LP          | AM     | Equity          |
| APPLIED MATERIALS, INC.               | AMAT   | Equity          |
| AMBARELLA, INC.                       | AMBA   | Equity          |
| AMBAC FINANCIAL GROUP, INC.           | AMBC   | Equity          |
| Ardagh Metal Packaging S.A.           | AMBP   | Equity          |
| AMC ENTERTAINMENT HOLDINGS, INC.      | AMC    | Equity          |
| AMCOR PLC                             | AMCR   | Equity          |
| AMC Networks Inc.                     | AMCX   | Equity          |
| ADVANCED MICRO DEVICES, INC.          | AMD    | Equity          |
| AMETEK, INC.                          | AME    | Equity          |
| AMEDISYS INC                          | AMED   | Equity          |
| APOLLO MEDICAL HOLDINGS, INC.         | AMEH   | Equity          |
| AFFILIATED MANAGERS GROUP INC         | AMG    | Equity          |
| AMGEN INC.                            | AMGN   | Equity          |
| American Homes 4 Rent                 | AMH    | Equity          |
| JP Morgan Alerian MLP Index ETN       | AMJ    | ETF             |
| AMKOR TECHNOLOGY, INC.                | AMKR   | Equity          |
| Alerian MLP ETF                       | AMLPM  | ETF             |
| AMYLYX PHARMACEUTICALS, INC.          | AMLX   | Equity          |
| AMN Healthcare Services, Inc.         | AMN    | Equity          |

| MIAX Options Securities as of 6/17/22   |        |                 |
|---|--------|-----------------|
| Company Name                            | Symbol | Instrument Type |
| AMERIPRISE FINANCIAL INC                | AMP    | Equity          |
| Ampio Pharmaceuticals Inc.              | AMPE   | Equity          |
| Amphastar Pharmaceuticals, Inc.         | AMPH   | Equity          |
| AMPLITUDE INC                           | AMPL   | Equity          |
| Altus Power, Inc.                       | AMPS   | Equity          |
| Amplify Energy Corporation              | AMPY   | Equity          |
| Alpha Metallurgical Resources, Inc.     | AMR    | Equity          |
| Ameresco, Inc.                          | AMRC   | Equity          |
| A-MARK PRECIOUS METALS, INC.            | AMRK   | Equity          |
| AMARIN CORPORATION PLC                  | AMRN   | Equity          |
| Amyris, Inc.                            | AMRS   | Equity          |
| Amneal Pharmaceuticals, Inc.            | AMRX   | Equity          |
| AMERICAN SUPERCONDUCTOR CORP            | AMSC   | Equity          |
| American Software Inc                   | AMSWA  | Equity          |
| AMERICAN TOWER CL A                     | AMT    | Equity          |
| APPLIED MOLECULAR TRANSPORT             | AMTI   | Equity          |
| AEMETIS, INC.                           | AMTX   | Equity          |
| American Woodmark Corp.                 | AMWD   | Equity          |
| AMERICAN WELL CORP                      | AMWL   | Equity          |
| America Movil S.A.B. de C.V.            | AMX    | Equity          |
| AMRYT PHARMA PLC                        | AMYT   | Equity          |
| InfraCap MLP ETF                        | AMZA   | ETF             |
| AMAZON.COM INC.                         | AMZN   | Equity          |
| AUTONATION, INC                         | AN     | Equity          |
| AnaptysBio, Inc.                        | ANAB   | Equity          |
| The Andersons, Inc.                     | ANDE   | Equity          |
| Arista Networks Inc                     | ANET   | Equity          |
| ABERCROMBIE & FITCH COMPANY             | ANF    | Equity          |
| Angie's List, Inc.                      | ANGI   | Equity          |
| AngioDynamcis, Inc.                     | ANGO   | Equity          |
| ANIKA THERAPEUTICS INC.                 | ANIK   | Equity          |
| ANI Pharmaceuticals, Inc.               | ANIP   | Equity          |
| ANIXA BIOSCIENCES, INC.                 | ANIX   | Equity          |
| ANNEXON, INC.                           | ANNX   | Equity          |
| ANSYS, Inc.                             | ANSS   | Equity          |
| AirNet Technology Inc.                  | ANTE   | Equity          |
| ANTHEM, INC.                            | ANTM   | Equity          |
| SPHERE 3D CORP.                         | ANY    | Equity          |
| Aon plc                                 | AON    | Equity          |
| Artivion, Inc.                          | AORT   | Equity          |
| A.O. Smith Corporation                  | AOS    | Equity          |
| Alpha & Omega Semiconductor, Ltd.       | AOSL   | Equity          |
| AMERICAN OUTDOOR BRANDS, INC.           | AOUT   | Equity          |
| APACHE CORPORATION                      | APA    | Equity          |
| Artisan Partners Asset Management, Inc. | APAM   | Equity          |

| MIAX Options Securities as of 6/17/22       |        |                 |
|---|--------|-----------------|
| Company Name                                | Symbol | Instrument Type |
| AIR PRODUCTS AND CHEMICALS,INC              | APD    | Equity          |
| APPLIED DNA SCIENCES, INC.                  | APDN   | Equity          |
| American Public Education, Inc.             | APEI   | Equity          |
| APOLLO ENDOSURGERY INC                      | APEN   | Equity          |
| API GROUP CORPORATION                       | APG    | Equity          |
| Amphenol Corporation                        | APH    | Equity          |
| AGORA, INC.                                 | API    | Equity          |
| Apple Hospitality REIT, Inc.                | APLE   | Equity          |
| Apellis Pharmaceuticals Inc                 | APLS   | Equity          |
| APPLIED THERAPEUTICS, INC.                  | APLT   | Equity          |
| Apollo Global Management LLC                | APO    | Equity          |
| Apogee Enterprises, Inc.                    | APOG   | Equity          |
| APPLOVIN CORP                               | APP    | Equity          |
| AppHarvest, Inc.                            | APPH   | Equity          |
| Appian Corporation                          | APPN   | Equity          |
| Digital Turbine, Inc.                       | APPS   | Equity          |
| APREA THERAPEUTICS, INC.                    | APRE   | Equity          |
| Blue Apron Holdings, Inc.                   | APRN   | Equity          |
| ALPHA PRO TECH LTD.                         | APT    | Equity          |
| Aptose Biosciences Inc                      | APTO   | Equity          |
| Preferred Apartment Communities, Inc.       | APTS   | Equity          |
| Aptiv PLC                                   | APTV   | Equity          |
| APTINYX INC                                 | APTX   | Equity          |
| AQUABOUNTY TECHNOLOGIES, INC                | AQB    | Equity          |
| Aqua Metals, Inc.                           | AQMS   | Equity          |
| ALGONQUIN POWER & UTILITIES CORP            | AQN    | Equity          |
| AQUESTIVE THERAPEUTICS, INC.                | AQST   | Equity          |
| Evoqua Water Technologies Corp.             | AQUA   | Equity          |
| ANTERO RESOURCES CORPORATION                | AR     | Equity          |
| Aravive, Inc.                               | ARAV   | Equity          |
| Accuray Incorporated                        | ARAY   | Equity          |
| ARC Document Solutions, Inc.                | ARC    | Equity          |
| ARCBEST CORPORATION                         | ARCB   | Equity          |
| Ares Capital Corporation                    | ARCC   | Equity          |
| ARCO PLATFORM LTD.                          | ARCE   | Equity          |
| Arch Coal, Inc.                             | ARCH   | Equity          |
| ARCOS DORADOS HOLDINGS INC. CLA             | ARCO   | Equity          |
| Arcturus Therapeutics Holdings Inc.         | ARCT   | Equity          |
| ARIDIS PHARMACEUTICALS, INC.                | ARDS   | Equity          |
| Ardelyx, Inc.                               | ARDX   | Equity          |
| Alexandria Real Estate Equities, Inc.       | ARE    | Equity          |
| AMERICAN RESOURCES CORP                     | AREC   | Equity          |
| Ares Management, L.P.                       | ARES   | Equity          |
| argenx SE                                   | ARGX   | Equity          |
| Apollo Commercial Real Estate Finance, Inc. | ARI    | Equity          |

| MIAX Options Securities as of 6/17/22                            |        |                 |
|--|--------|-----------------|
| Company Name   | Symbol | Instrument Type |
| ARK FINTECH INNOVATION   | ARKF   | ETF             |
| ARK GENOMIC REVOLUTION ETF                                       | ARKG   | ETF             |
| ARK Innovation ETF   | ARKK   | ETF             |
| ARK AUTONOMOUS TECH & ROBOTICS                                   | ARKQ   | ETF             |
| ARK Next Generation Internet ETF                                 | ARKW   | ETF             |
| ARK SPACE EXPLORATION & INNOVATION ETF                           | ARKX   | ETF             |
| Arlo Technologies, Inc.  | ARLO   | Equity          |
| ALLIANCE RESOURCE PARTNERS                                       | ARLP   | Equity          |
| Aramark  | ARMK   | Equity          |
| Arconic Inc.   | ARNC   | Equity          |
| Archrock, Inc.   | AROC   | Equity          |
| ARCUTIS BIOTHERAPEUTICS INC                                      | ARQT   | Equity          |
| ARMOUR Residential REIT, Inc.                                    | ARR    | Equity          |
| ARRY TECHNOLOGIES, INC.  | ARRY   | Equity          |
| Arrival  | ARVL   | Equity          |
| Arvinas,inc  | ARVN   | Equity          |
| ARROW ELECTRONICS INC.   | ARW    | Equity          |
| ARROWHEAD RESEARCH CORP.   | ARWR   | Equity          |
| ASA Gold and Precious Metals Limited                             | ASA    | Equity          |
| Asana, Inc.  | ASAN   | Equity          |
| ASSOCIATED BANC CORP   | ASB    | Equity          |
| Ardmore Shipping Corporation                                     | ASC    | Equity          |
| ASGN Inc.  | ASGN   | Equity          |
| ASHLAND INC  | ASH    | Equity          |
| Deutsche X-Trackers Harvest CSI 300 China A Shares ETF           | ASHR   | ETF             |
| Deutsche X-trackers Harvest CSI 500 China A-Shares Small Cap ETF | ASHS   | ETF             |
| AdvanSix Inc.  | ASIX   | Equity          |
| AERSALE CORPORATION  | ASLE   | Equity          |
| ASLAN PHARMACEUTICALS LTD. ADR                                   | ASLN   | Equity          |
| Assembly Biosciences, Inc.                                       | ASMB   | Equity          |
| ASML HOLDING NV  | ASML   | Equity          |
| Ascendis Pharma A/S  | ASND   | Equity          |
| ACADEMY SPORTS & OUTDOOR INC                                     | ASO    | Equity          |
| ASPEN AEROGELS, INC.   | ASPN   | Equity          |
| Altisource Portfolio Solutions SA                                | ASPS   | Equity          |
| Assertio Therapeutics, Inc.                                      | ASRT   | Equity          |
| ASTEC INDUSTRIES, INC  | ASTE   | Equity          |
| Astra Space, Inc   | ASTR   | Equity          |
| AST SpaceMobile, Inc.  | ASTS   | Equity          |
| Asure Software, Inc.   | ASUR   | Equity          |
| ASE TECHNOLOGY HOLDING CO., LTD.                                 | ASX    | Equity          |
| Asensus Surgical, Inc.   | ASXC   | Equity          |
| Amtech Systems, Inc.   | ASYS   | Equity          |
| ATAI LIFE SCIENCES N.V.  | ATAI   | Equity          |
| ATOTECH LIMITED  | ATC    | Equity          |

| MIAX Options Securities as of 6/17/22   |        |                 |
|---|--------|-----------------|
| Company Name                            | Symbol | Instrument Type |
| Atlas Corporation                       | ATCO   | Equity          |
| ATLAS TECHNICAL CONSULTANTS, INC.       | ATCX   | Equity          |
| ALPHATEC HOLDINGS INC                   | ATEC   | Equity          |
| A10 Networks, Inc.                      | ATEN   | Equity          |
| Aterian, Inc.                           | ATER   | Equity          |
| Anterix Inc                             | ATEX   | Equity          |
| Adtalem Global Education Inc.           | ATGE   | Equity          |
| ATHIRA PHARMA, INC.                     | ATHA   | Equity          |
| Autohome Inc (ADR)                      | ATHM   | Equity          |
| ATHERSYS, INC.                          | ATHX   | Equity          |
| Allegheny Technologies, Inc.            | ATI    | Equity          |
| ATI Physical Therapy, Inc               | ATIP   | Equity          |
| Atkore International Group, Inc         | ATKR   | Equity          |
| 180 LIFE SCIENCES CORP.                 | ATNF   | Equity          |
| Actinium Pharmaceuticals, Inc.          | ATNM   | Equity          |
| Athenex, Inc.                           | ATNX   | Equity          |
| Atmos Energy Corp                       | ATO    | Equity          |
| ATOMERA INCORPORATED                    | ATOM   | Equity          |
| Atossa Therapeutics, Inc.               | ATOS   | Equity          |
| AptarGroup, Inc.                        | ATR    | Equity          |
| Atara Biotherapeutics, Inc.             | ATRA   | Equity          |
| AtriCure Inc                            | ATRC   | Equity          |
| Air Transport Services Group Inc.       | ATSG   | Equity          |
| Altice USA, Inc.                        | ATUS   | Equity          |
| Astria Therapeutics, Inc.               | ATXS   | Equity          |
| ACUITYADS HOLDINGS INC                  | ATY    | Equity          |
| ANGLOGOLD ASHANTI LTD.                  | AU     | Equity          |
| Audacy, Inc.                            | AUD    | Equity          |
| AUDIOCODES LTD.                         | AUDC   | Equity          |
| Aurinia Pharmaceuticals Inc.            | AUPH   | Equity          |
| Aurora Innovation, Inc.                 | AUR    | Equity          |
| AUSTERLITZ ACQUISITION CORP. I          | AUS    | Equity          |
| AUTOLUS THERAPEUTICS PLC                | AUTL   | Equity          |
| AutoWeb, Inc.                           | AUTO   | Equity          |
| YAMANA GOLD, INC.                       | AUY    | Equity          |
| AVEANNA HEALTHCARE HOLDINGS             | AVAH   | Equity          |
| AVANTI ACQUISITION CORP                 | AVAN   | Equity          |
| Aerovironment Inc                       | AVAV   | Equity          |
| AVALONBAY COMMUNITIES INC               | AVB    | Equity          |
| AMERICAN VIRTUAL CLOUD TECHNOLOGIES INC | AVCT   | Equity          |
| American Vanguard Corp.                 | AVD    | Equity          |
| Avadel Pharmaceuticals plc              | AVDL   | Equity          |
| AVIDXCHANGE HOLDINGS INC                | AVDX   | Equity          |
| AVEO Pharmaceuticals, Inc.              | AVEO   | Equity          |
| Broadcom Inc.                           | AVGO   | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| AVID TECHNOLOGY,INC                   | AVID   | Equity          |
| ATE PHARMACEUTICAL INC.               | AVIR   | Equity          |
| Avalara, Inc.                         | AVLR   | Equity          |
| Avanos Medical, Inc.                  | AVNS   | Equity          |
| Avient Corporation                    | AVNT   | Equity          |
| AVIAT NETWORKS INC                    | AVNW   | Equity          |
| AvePoint, Inc                         | AVPT   | Equity          |
| AVROBIO INC                           | AVRO   | Equity          |
| AVNET INC                             | AVT    | Equity          |
| Avantor, Inc.                         | AVTR   | Equity          |
| Avalo Therapeutics, Inc.              | AVTX   | Equity          |
| Anavex Life Sciences Corp.            | AVXL   | Equity          |
| AVERY DENNISON CORP.                  | AVY    | Equity          |
| Avaya Holdings Corp.                  | AVYA   | Equity          |
| ETFMG TRAVEL TECH ETF                 | AWAY   | ETF             |
| Aspira Women's Health Inc.            | AWH    | Equity          |
| Armstrong World Industries, Inc.      | AWI    | Equity          |
| American Water Works Co., Inc.        | AWK    | Equity          |
| Aware Inc                             | AWRE   | Equity          |
| Axos Financial, Inc.                  | AX     | Equity          |
| ACCELERATE DIAGNOSTICS, INC.          | AXDX   | Equity          |
| AxoGen, Inc.                          | AXGN   | Equity          |
| AMERICAN AXLE & MFG. HLDNGS           | AXL    | Equity          |
| AXCELLA HEALTH, INC.                  | AXLA   | Equity          |
| Axonics Modulation Technologies Inc   | AXNX   | Equity          |
| Axon Enterprise, Inc                  | AXON   | Equity          |
| AMERICAN EXPRESS COMPANY              | AXP    | Equity          |
| AXIS CAPITAL HOLDINGS LIMITED         | AXS    | Equity          |
| Axsome Therapeutics, Inc.             | AXSM   | Equity          |
| Axalta Coating Systems Ltd.           | AXTA   | Equity          |
| AXT, Inc.                             | AXTI   | Equity          |
| Alexco Resource Corporation           | AXU    | Equity          |
| Atlantica Yield plc                   | AY     | Equity          |
| Acuity Brands, Inc.                   | AYI    | Equity          |
| AYRO, INC.                            | AYRO   | Equity          |
| AYTU BIOSCIENCE INC                   | AYTU   | Equity          |
| Alteryx, Inc.                         | AYX    | Equity          |
| AZEK COMPANY INC                      | AZEK   | Equity          |
| ASTRAZENECA                           | AZN    | Equity          |
| AUTOZONE, INC.                        | AZO    | Equity          |
| AZURE POWER GLOBAL LTD.               | AZRE   | Equity          |
| Azenta, Inc                           | AZTA   | Equity          |
| Azul S.A.                             | AZUL   | Equity          |
| AZZ Incorporated                      | AZZ    | Equity          |
| THE BOEING COMPANY                    | BA     | Equity          |

| MIAX Options Securities as of 6/17/22              |        |                 |
|--|--------|-----------------|
| Company Name                                       | Symbol | Instrument Type |
| ALIBABA GROUP HOLDING LTD                          | BABA   | Equity          |
| BANK OF AMERICA CORPORATION                        | BAC    | Equity          |
| Booz Allen Hamilton Holding Corporation            | BAH    | Equity          |
| Ball Corporation                                   | BALL   | Equity          |
| Bally's Corporation                                | BALY   | Equity          |
| Brookfield Asset Management Inc                    | BAM    | Equity          |
| Banc of California, Inc.                           | BANC   | Equity          |
| BANDWIDTH, INC                                     | BAND   | Equity          |
| Credicorp Ltd.                                     | BAP    | Equity          |
| The Original BARK Company                          | BARK   | Equity          |
| Liberty Media Corporation (Series C) Liberty Brave | BATRK  | Equity          |
| BAXTER INTERNATIONAL INC.                          | BAX    | Equity          |
| Blackberry Limited                                 | BB     | Equity          |
| BigBear.ai Holdings, Inc.                          | BBAI   | Equity          |
| BBVA Banco Frances S.A                             | BBAR   | Equity          |
| BED BATH & BEYOND INC.                             | BBBY   | Equity          |
| BANCO BRADESCO S.A.                                | BBD    | Equity          |
| Barings BDC, Inc.                                  | BBDC   | Equity          |
| Market Vectors Biotech ETF                         | BBH    | ETF             |
| VINCO VENTURES, INC.                               | BBIG   | Equity          |
| BridgeBio Pharma Inc                               | BBIO   | Equity          |
| Barrett Business Services Inc.                     | BBSI   | Equity          |
| BANCO BILBAO VIZCAYA                               | BBVA   | Equity          |
| Build-A-Bear Workshop, Inc                         | BBW    | Equity          |
| Bath & Body Works, Inc.                            | BBWI   | Equity          |
| BEST BUY COMPANY, INC.                             | BBY    | Equity          |
| BRUNSWICK CORP                                     | BC     | Equity          |
| BIOATLA, INC.                                      | BCAB   | Equity          |
| Boise Cascade Company                              | BCC    | Equity          |
| BIOCARDIA, INC                                     | BCDA   | Equity          |
| BCE INC  | BCE    | Equity          |
| ATRECA, INC.                                       | BCEL   | Equity          |
| Brainstorm Cell Therapeutics Inc.                  | BCLI   | Equity          |
| THE BRINK'S COMPANY                                | BCO    | Equity          |
| Blucora, Inc.                                      | BCOR   | Equity          |
| Brightcove Inc                                     | BCOV   | Equity          |
| Balchem Corporation                                | BCPC   | Equity          |
| BIOCRYST PHARMACEUTICAS INC                        | BCRX   | Equity          |
| BARCLAYS PLC                                       | BCS    | Equity          |
| BAIN CAPITAL SPECIALTY FINANCE, INC.               | BCSF   | Equity          |
| BRIACELL THERAPEUTICS CORP                         | BCTX   | Equity          |
| BICYCLE THERAPEUTICS PLC                           | BCYC   | Equity          |
| Belden Inc.  | BDC    | Equity          |
| Brandywine Realty Trust                            | BDN    | Equity          |
| BREAKWAVE DRY BULK SHIPPING ETF                    | BDRY   | ETF             |



| MIAX Options Securities as of 6/17/22        |        |                 |
|--|--------|-----------------|
| Company Name                                 | Symbol | Instrument Type |
| Black Diamond Therapeutics, Inc.             | BDTX   | Equity          |
| BECTON, DICKINSON AND CO                     | BDX    | Equity          |
| Bloom Energy Corporation                     | BE     | Equity          |
| BEAM THERAPEUTICS, INC.                      | BEAM   | Equity          |
| BEACON ROOFING SUPPLY, INC                   | BECN   | Equity          |
| BEAM GLOBAL                                  | BEEM   | Equity          |
| E Holdings Inc                               | BEKE   | Equity          |
| FRANKLIN RESOURCES INC.                      | BEN    | Equity          |
| BENESSERE CAPITAL ACQUISITION CORP           | BENE   | Equity          |
| BROOKFIELD RENEWABLE PARTNERS LP             | BEP    | Equity          |
| BROOKFIELD RENEWABLE CORPORATION             | BEPC   | Equity          |
| Berry Plastics Group Inc.                    | BERY   | Equity          |
| BEST Inc.                                    | BEST   | Equity          |
| Roundhill Sports Betting & iGaming ETF       | BETZ   | Equity          |
| Bright Horizons Family Solutions Inc         | BFAM   | Equity          |
| Brown Forman Corporation Cl. B (150 shrs)    | BFB    | Equity          |
| Bread Financial Holdings, Inc.               | BFH    | Equity          |
| BURGERFI INTERNATIONAL, INC.                 | BFI    | Equity          |
| Butterfly Network, Inc.                      | BFLY   | Equity          |
| BUNGE LIMITED                                | BG     | Equity          |
| BGC Partners Inc                             | BGCP   | Equity          |
| Big 5 Sporting Goods Corp.                   | BGFV   | Equity          |
| BeiGene, Ltd.                                | BGNE   | Equity          |
| Berkshire Grey, Inc                          | BGRY   | Equity          |
| B&G Foods Inc.                               | BGS    | Equity          |
| Bausch Health Companies Inc.                 | BHC    | Equity          |
| Brighthouse Financial, Inc.                  | BHF    | Equity          |
| BRIGHT HEALTH GROUP                          | BHG    | Equity          |
| Benson Hill, Inc.                            | BHIL   | Equity          |
| Berkshire Hills Bancorp Inc                  | BHLB   | Equity          |
| BHP BILLITON LIMITED                         | BHP    | Equity          |
| Braemar Hotels & Resorts Inc.                | BHR    | Equity          |
| Biohaven Pharmaceutical Holding Company Ltd. | BHVN   | Equity          |
| PROSHARES ULTRA NASDAQ BIOTECHNOLOGY         | BIB    | ETF             |
| BAIDU, INC.                                  | BIDU   | Equity          |
| BIG LOTS INC.                                | BIG    | Equity          |
| BigCommerce Holdings, Inc.                   | BIGC   | Equity          |
| BIOGEN IDEC INC.                             | BIIB   | Equity          |
| SPDR Bloomberg Barclays 1-3 Month T-Bill ETF | BIL    | ETF             |
| Bilibili Inc.                                | BILI   | Equity          |
| Bill.com Holdings Inc                        | BILL   | Equity          |
| Bio-Rad Laboratories, Inc.                   | BIO    | Equity          |
| BIOCEPT INC                                  | BIOC   | Equity          |
| Biora Therapeutics, Inc.                     | BIOR   | Equity          |
| BIOCERES CROP SOLUTIONS CORP.                | BIOX   | Equity          |

| MIAX Options Securities as of 6/17/22     |        |                 |
|---|--------|-----------------|
| Company Name                              | Symbol | Instrument Type |
| Brookfield Infrastructure Partners L.P.   | BIP    | Equity          |
| ALLBIRDS, INC.                            | BIRD   | Equity          |
| PROSHARES ULTRASHORT NASDAQ BIOTECH       | BIS    | ETF             |
| BITFARMS LTD.                             | BITF   | Equity          |
| ProShares Bitcoin Strategy ETF            | BITO   | ETF             |
| BITWISE CRYPTO INDUSTRY INNOVATORS ETF    | BITQ   | ETF             |
| BJ's Warehouse Holdings, Inc.             | BJ     | Equity          |
| BJ S RESTAURANTS INC                      | BJRI   | Equity          |
| THE BANK OF NEW YORK MELLON CORPORATION   | BK     | Equity          |
| Brookdale Senior Living Inc               | BKD    | Equity          |
| The Buckle, Inc.                          | BKE    | Equity          |
| Blueknight Energy Partners, L.P.          | BKEP   | Equity          |
| iShares MSCI BRIC ETF                     | BKF    | Equity          |
| BLACK HILLS CORPORATION                   | BKH    | Equity          |
| Black Knight Inc                          | BKI    | Equity          |
| Bakkt Holdings, Inc.                      | BKKT   | Equity          |
| PowerShares Senior Loan (ETF)             | BKLN   | ETF             |
| Booking Holdings Inc.                     | BKNG   | Equity          |
| Baker Hughes Company                      | BKR    | Equity          |
| BlackSky Technology Inc                   | BKSY   | Equity          |
| BankUnited, Inc.                          | BKU    | Equity          |
| BIO-KEY INTERNATIONAL, INC.               | BKYI   | Equity          |
| BlackLine Inc                             | BL     | Equity          |
| Siren Nasdaq NexGen Economy ETF           | BLCN   | ETF             |
| TopBuild Corp.                            | BLD    | Equity          |
| Blade Air Mobility, Inc.                  | BLDE   | Equity          |
| BALLARD POWER SYSTEMS INC                 | BLDP   | Equity          |
| Builders FirstSource Inc.                 | BLDR   | Equity          |
| BioLife Solutions, Inc                    | BLFS   | Equity          |
| BERKELEY LIGHTS INC                       | BLI    | Equity          |
| BLACKROCK INC                             | BLK    | Equity          |
| Blackbaud Inc.                            | BLKB   | Equity          |
| Bloomin Brands Inc.                       | BLMN   | Equity          |
| BLEND LABS, INC                           | BLND   | Equity          |
| Blink Charging Co                         | BLNK   | Equity          |
| Amplify Transformational Data Sharing ETF | BLOK   | ETF             |
| BIOLINE RX LTD                            | BLRX   | Equity          |
| BRIGHT LIGHTS ACQUISITION CORP.           | BLTS   | Equity          |
| BELLUS HEALTH INC.                        | BLU    | Equity          |
| bluebird bio Inc                          | BLUE   | Equity          |
| Banco Macro S.A.                          | BMA    | Equity          |
| Bumble Inc.                               | BMBL   | Equity          |
| Bank of Montreal                          | BMO    | Equity          |
| Biomerica Inc                             | BMRA   | Equity          |
| BIOMARIN PHARMACEUTICAL INC.              | BMRN   | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| BM TECHNOLOGIES, INC.                  | BMTX   | Equity          |
| BRISTOL-MYERS SQUIBB COMPANY           | BMY    | Equity          |
| Vanguard Total Bond Market ETF         | BND    | ETF             |
| Barnes & Noble Education, Inc.         | BNED   | Equity          |
| BENEFITFOCUS, INC.                     | BNFT   | Equity          |
| BIONANO GENOMICS, INC.                 | BNGO   | Equity          |
| Broadstone Net Lease, Inc.             | BNL    | Equity          |
| United States Brent Oil ETF            | BNO    | ETF             |
| Bank of Nova Scotia                    | BNS    | Equity          |
| BioNTech SE                            | BNTX   | Equity          |
| The Beachbody Company, Inc.            | BODY   | Equity          |
| PROSHARES ULTRA DJ-UBS NATURAL GAS     | BOIL   | ETF             |
| Bok Financial Corporation              | BOKF   | Equity          |
| DMC Global Inc.                        | BOOM   | Equity          |
| Boot Barn Holdings, Inc.               | BOOT   | Equity          |
| Global X Robotics & Artfcl Intlgnc ETF | BOTZ   | ETF             |
| Box, Inc.                              | BOX    | Equity          |
| BOXED INC                              | BOXD   | Equity          |
| BP PLC                                 | BP     | Equity          |
| Blueprint Medicines Corporation        | BPMC   | Equity          |
| Popular Inc. (10 shrs)                 | BPOP   | Equity          |
| BP PRUDHOE BAY ROYALTY TRUST           | BPT    | Equity          |
| Broadridge Financial Solutions, Inc.   | BR     | Equity          |
| BRAGG GAMING GROUP INC.                | BRAG   | Equity          |
| BRC Inc.                               | BRCC   | Equity          |
| BIRD GLOBAL, INC.                      | BRDS   | Equity          |
| BREEZE HOLDINGS ACQUISITION            | BREZ   | Equity          |
| Market Vectors Brazil Small Cap ETF    | BRF    | ETF             |
| BRF - Brasil Foods SA                  | BRFS   | Equity          |
| Bluerock Residential Growth REIT, Inc. | BRG    | Equity          |
| BERKSHIRE HATHAWAY INC.                | BRKB   | Equity          |
| Brookline Bancorp, Inc.                | BRKL   | Equity          |
| Bruker Corporation                     | BRKR   | Equity          |
| BRILLIANT EARTH GROUP, INC.            | BRLT   | Equity          |
| BROADMARK REALTY CAPITAL INC           | BRMK   | Equity          |
| BROWN & BROWN, INC                     | BRO    | Equity          |
| DUTCH BROS INC.                        | BROS   | Equity          |
| BRP GROUP, INC.                        | BRP    | Equity          |
| B. RILEY PRINCIPAL 150 MERGER CORP.    | BRPM   | Equity          |
| BrightSpire Capital, Inc.              | BRSP   | Equity          |
| BRT APARTMENTS CORP                    | BRT    | Equity          |
| Brixmor Property Group Inc             | BRX    | Equity          |
| Berry Corporation                      | BRY    | Equity          |
| Direxion Daily Brazil Bull 3X ETF      | BRZU   | ETF             |
| Banco Santander Brasil SA              | BSBR   | Equity          |

| MIAX Options Securities as of 6/17/22   |        |                 |
|---|--------|-----------------|
| Company Name                            | Symbol | Instrument Type |
| Bassett Furniture Industries Inc        | BSET   | Equity          |
| BioSig Technologies, Inc.               | BSGM   | Equity          |
| BRIGHTSPHERE INVESTMENT GROUP INC       | BSIG   | Equity          |
| Black Stone Minerals L.P.               | BSM    | Equity          |
| BSQUARE Corp.                           | BSQR   | Equity          |
| BOSTON SCIENTIFIC CORPORATION           | BSX    | Equity          |
| BENTLEY SYSTEMS INCORPORATED            | BSY    | Equity          |
| BioXcel Therapeutics Inc.               | BTAI   | Equity          |
| BIT DIGITAL, INC.                       | BTBT   | Equity          |
| BIT Mining Limited                      | BTCM   | Equity          |
| BIOTRICITY, INC.                        | BTCY   | Equity          |
| VALKYRIE BITCOIN STRATEGY ETF           | BTF    | ETF             |
| B2Gold Corp.                            | BTG    | Equity          |
| British American Tobacco PLC            | BTI    | Equity          |
| Ballantyne Strong, Inc.                 | BTN    | Equity          |
| BTRS HOLDINGS INC.                      | BTRS   | Equity          |
| BETTER THERAPEUTICS INC                 | BTTX   | Equity          |
| Peabody Energy Corporation              | BTU    | Equity          |
| BRIDGETOWN HOLDINGS LIMITED             | BTWN   | Equity          |
| BROOKLYN IMMUNOTHERAPEUTICS, INC.       | BTX    | Equity          |
| Anheuser-Busch InBev                    | BUD    | Equity          |
| GLOBAL X CYBER SECURITY                 | BUG    | ETF             |
| Burlington Stores Inc                   | BURL   | Equity          |
| VANECK VECTORS SOCIAL SENTIMENT ETF     | BUZZ   | ETF             |
| COMPANIA DE MINAS BUENAVENTURA S.A.-ADR | BVN    | Equity          |
| Babcock & Wilcox Enterprises, Inc.      | BW     | Equity          |
| BORGWARNER INC.                         | BWA    | Equity          |
| BETTER WORLD ACQUISITION CORP.          | BWAC   | Equity          |
| BROADWIND, INC.                         | BWEN   | Equity          |
| BWX Technologies, Inc.                  | BWXT   | Equity          |
| THE BLACKSTONE GROUP LP                 | BX     | Equity          |
| BlueLinx Holdings Inc                   | BXC    | Equity          |
| Blackstone Mortgage Trust, Inc.         | BXMT   | Equity          |
| BOSTON PROPERTIES INC                   | BXP    | Equity          |
| BOYD GAMING CORP.                       | BYD    | Equity          |
| Beyond Meat, Inc.                       | BYND   | Equity          |
| BEYONDSRING INC.                        | BYSI   | Equity          |
| KANZHUN LTD.                            | BZ     | Equity          |
| BUZZFEED, INC                           | BZFD   | Equity          |
| BEAZER HOMES USA INC.                   | BZH    | Equity          |
| ProShares UltraShort MSCI Brazil Capped | BZQ    | ETF             |
| Baozun Inc.                             | BZUN   | Equity          |
| CITIGROUP, INC.                         | C      | Equity          |
| China Automotive Systems Inc            | CAAS   | Equity          |
| CABALETTA BIO, INC.                     | CABA   | Equity          |

| MIAX Options Securities as of 6/17/22   |        |                 |
|---|--------|-----------------|
| Company Name                            | Symbol | Instrument Type |
| Credit Acceptance Corp.                 | CACC   | Equity          |
| CACI INTERNATIONAL, INC.                | CACI   | Equity          |
| CAE Inc                                 | CAE    | Equity          |
| ConAgra Brands, Inc.                    | CAG    | Equity          |
| CARDINAL HEALTH INC                     | CAH    | Equity          |
| Cannon Inc-Spons ADR                    | CAJ    | Equity          |
| THE CHEESECAKE FACTORY                  | CAKE   | Equity          |
| Caleres, Inc.                           | CAL    | Equity          |
| Cal-Maine Foods, Inc.                   | CALM   | Equity          |
| CALLIDITAS THERAPEUTICS AB              | CALT   | Equity          |
| Calix, Inc.                             | CALX   | Equity          |
| CalAmp Corp                             | CAMP   | Equity          |
| Camtek Ltd.                             | CAMT   | Equity          |
| CANAAN INC. SPONSORED ADR               | CAN    | Equity          |
| Teucrium Sugar                          | CANE   | ETF             |
| Cano Health, Inc.                       | CANO   | Equity          |
| CROSSAMERICA PARTNERS LP                | CAPL   | Equity          |
| Capricor Therapeutics, Inc.             | CAPR   | Equity          |
| Avis Budget Group Inc                   | CAR    | Equity          |
| Cara Therapeutics Inc.                  | CARA   | Equity          |
| CarGurus, Inc.                          | CARG   | Equity          |
| Carrier Global Corporation              | CARR   | Equity          |
| Cars.com Inc.                           | CARS   | Equity          |
| Casa Systems, Inc.                      | CASA   | Equity          |
| Meta Financial Group, Inc.              | CASH   | Equity          |
| Casey's General Stores, Inc.            | CASY   | Equity          |
| CATERPILLAR INC.                        | CAT    | Equity          |
| Chubb Limited                           | CB     | Equity          |
| CBAK ENERGY TECHNOLOGY, INC.            | CBAT   | Equity          |
| CymaBay Therapeutics, Inc.              | CBAY   | Equity          |
| Companhia Brasileira de Distribuicao    | CBD    | Equity          |
| Catalyst Biosciences, Inc.              | CBIO   | Equity          |
| CBOE HOLDINGS, INC.                     | CBOE   | Equity          |
| CBRE Group, Inc.                        | CBRE   | Equity          |
| Cracker Barrel Old Country Store        | CBRL   | Equity          |
| CABOT CORPORATION                       | CBT    | Equity          |
| The Chemours Company                    | CC     | Equity          |
| C4 THERAPEUTICS, INC.                   | CCCC   | Equity          |
| CCC Intelligent Solutions Holdings Inc. | CCCS   | Equity          |
| Coca-Cola European Partners plc         | CCEP   | Equity          |
| CROWN CASTLE INTER.                     | CCI    | Equity          |
| CAMECO CORPORATION                      | CCJ    | Equity          |
| CROWN HOLDINGS INC.                     | CCK    | Equity          |
| CARNIVAL CORPORATION                    | CCL    | Equity          |
| CSI Compressco LP                       | CCLP   | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| CMC Materials, Inc.                   | CCMP   | Equity          |
| Clear Channel Outdoor HLD Inc CL. A   | CCO    | Equity          |
| Cogent Communications Holdings, Inc.  | CCOI   | Equity          |
| Cross Country Healthcare, Inc.        | CCRN   | Equity          |
| Century Communities, Inc.             | CCS    | Equity          |
| CHURCHILL CAPITAL CORP. V             | CCV    | Equity          |
| CHEMOCENTRYX, INC.                    | CCXI   | Equity          |
| CHINDATA GROUP HOLDINGS LIMITED       | CD     | Equity          |
| Ceridian HCM Holding Inc              | CDAY   | Equity          |
| COEUR d' ALENE MINES CORP             | CDE    | Equity          |
| Centennial Resource Development, Inc. | CDEV   | Equity          |
| CDK GLOBAL, INC.                      | CDK    | Equity          |
| Cardlytics Inc                        | CDLX   | Equity          |
| Avid Bioservices, Inc.                | CDMO   | Equity          |
| CareDx, Inc                           | CDNA   | Equity          |
| CADENCE DESIGN SYSTEMS, I             | CDNS   | Equity          |
| Cedar Realty Trust, Inc               | CDR    | Equity          |
| CDW CORPORATION                       | CDW    | Equity          |
| ChromaDex Corporation                 | CDXC   | Equity          |
| Codexis Inc.                          | CDXS   | Equity          |
| Cadiz Inc.                            | CDZI   | Equity          |
| CELANESE CORPORATION                  | CE     | Equity          |
| CECO Environmental Corp.              | CECE   | Equity          |
| CAMBER ENERGY, INC.                   | CEI    | Equity          |
| CONSOL Energy Inc                     | CEIX   | Equity          |
| Celsius Holdings, Inc.                | CELH   | Equity          |
| Celularity Inc.                       | CELU   | Equity          |
| Chembio Diagnostics, Inc.             | CEMI   | Equity          |
| Cenntro Electric Group Limited        | CENN   | Equity          |
| CENTURY ALUMINUM COMPANY              | CENX   | Equity          |
| CRESTWOOD EQUITY PARTNERS LP          | CEQP   | Equity          |
| CEREVEL THERAPEUTICS HOLDINGS, INC    | CERE   | Equity          |
| CERUS CORPORATION                     | CERS   | Equity          |
| CERTARA, INC.                         | CERT   | Equity          |
| Ceva Inc                              | CEVA   | Equity          |
| CF INDUSTRIES HOLDINGS, INC.          | CF     | Equity          |
| Capitol Federal Financial             | CFFN   | Equity          |
| Citizens Financial Group, Inc.        | CFG    | Equity          |
| CONFLUENT, INC.                       | CFLT   | Equity          |
| CULLEN/FROST BANKERS INC.             | CFR    | Equity          |
| CONTRAFECT CORP.                      | CFRX   | Equity          |
| CF ACQUISITION CORP. VI               | CFVI   | Equity          |
| The Carlyle Group LP                  | CG     | Equity          |
| Canopy Growth Corporation             | CGC    | Equity          |
| CULLINAN ONCOLOGY, INC.               | CGEM   | Equity          |

| MIAX Options Securities as of 6/17/22              |        |                 |
|--|--------|-----------------|
| Company Name                                       | Symbol | Instrument Type |
| Compugen Ltd.                                      | CGEN   | Equity          |
| COGNYTE SOFTWARE LTD                               | CGNT   | Equity          |
| COGNEX CORPORATION                                 | CGNX   | Equity          |
| Capstone Green Energy Corporation                  | CGRN   | Equity          |
| Direxion Dly CSI 300 Chn A Shr Br 1X ETF           | CHAD   | ETF             |
| Direxion Dly CSI 300 Chn A Shr Br 2X ETF           | CHAU   | ETF             |
| CHURCH & DWIGHT CO.                                | CHD    | Equity          |
| Churchill Downs, Inc.                              | CHDN   | Equity          |
| Chemed Corporation                                 | CHE    | Equity          |
| Chefs' Warehouse Inc/The                           | CHEF   | Equity          |
| CHEGG, INC   | CHGG   | Equity          |
| Choice Hotels International Inc.                   | CHH    | Equity          |
| Global X MSCI China Consumer Discretionary ETF     | CHIQ   | Equity          |
| Global X China Financials ETF                      | CHIX   | ETF             |
| CHESAPEAKE ENERGY CORPORATION                      | CHK    | Equity          |
| CHECK POINT SOFTWARE TECHNOLOGIES LTD.             | CHKP   | Equity          |
| Change Healthcare Inc                              | CHNG   | Equity          |
| ChargePoint Holdings, Inc.                         | CHPT   | Equity          |
| Coherus BioSciences, Inc.                          | CHRS   | Equity          |
| CH ROBINSON WORLDWIDE INC.                         | CHRW   | Equity          |
| CHICO'S FAS, INC.                                  | CHS    | Equity          |
| Charter Communications Inc. Cl A                   | CHTR   | Equity          |
| CHUY'S HOLDINGS, INC.                              | CHUY   | Equity          |
| Chewy, Inc.  | CHWY   | Equity          |
| ChampionX Corporation                              | CHX    | Equity          |
| CIGNA CORPORATION                                  | CI     | Equity          |
| Citizens Inc.                                      | CIA    | Equity          |
| First Trust NASDAQ Cybersecurity ETF               | CIBR   | ETF             |
| CIENA CORPORATION                                  | CIEN   | Equity          |
| Cipher Mining Inc.                                 | CIFR   | Equity          |
| Companhia Energetica de Minas Gerais - CEMIG (125) | CIG    | Equity          |
| CHIMERA INVESTMENT CORPORATION                     | CIM    | Equity          |
| Cincinnati Financial Corp.                         | CINF   | Equity          |
| City Office REIT, Inc.                             | CIO    | Equity          |
| CIRCOR International, Inc.                         | CIR    | Equity          |
| CERBERUS CYBER SENTINEL CORP                       | CISO   | Equity          |
| Civista BancShares Inc                             | CIVB   | Equity          |
| Civitas Resources, Inc                             | CIVI   | Equity          |
| CIGNA FINANCIAL CORP                               | CIXX   | Equity          |
| CHECKPOINT THERAPEUTICS, INC.                      | CKPT   | Equity          |
| COLGATE-PALMOLIVE COMPANY                          | CL     | Equity          |
| Clarus Corporation                                 | CLAR   | Equity          |
| Core Laboratories N.V.                             | CLB    | Equity          |
| Caladrius Biosciences, Inc.                        | CLBS   | Equity          |
| Cellebrite DI Ltd.                                 | CLBT   | Equity          |

| MIAX Options Securities as of 6/17/22                     |        |                 |
|---|--------|-----------------|
| Company Name  | Symbol | Instrument Type |
| Chatham Lodging Trust                                     | CLDT   | Equity          |
| Celldex Therapeutics, Inc.                                | CLDX   | Equity          |
| CLIFFS NATURAL RESOURCES INC.                             | CLF    | Equity          |
| Clearfield, Inc.  | CLFD   | Equity          |
| CLEAN HARBORS INC   | CLH    | Equity          |
| ClearSign Combustion Corporation                          | CLIR   | Equity          |
| Collectis S.A.  | CLLS   | Equity          |
| Calumet Specialty Products Partners, L.P.                 | CLMT   | Equity          |
| CLEAN ENERGY FUELS CORPORATION                            | CLNE   | Equity          |
| CLENE INC   | CLNN   | Equity          |
| Global X Cloud Computing ETF Global X Cloud Computing ETF | CLOU   | ETF             |
| Clover Health Investments, Corporation                    | CLOV   | Equity          |
| CLIPPER REALTY, INC.                                      | CLPR   | Equity          |
| CLEARPOINT NEURO INC                                      | CLPT   | Equity          |
| CONTINENTAL RESOURCES, INC.                               | CLR    | Equity          |
| Celestica, Inc.   | CLS    | Equity          |
| Clearside Biomedical, Inc.                                | CLSD   | Equity          |
| CleanSpark, Inc.  | CLSK   | Equity          |
| Clever Leaves Holdings Inc.                               | CLVR   | Equity          |
| CLOVIS ONCOLOGY, INC.                                     | CLVS   | Equity          |
| Clarivate Plc   | CLVT   | Equity          |
| Clearwater Paper Corporation                              | CLW    | Equity          |
| CLOROX CO   | CLX    | Equity          |
| CALYXT, INC.  | CLXT   | Equity          |
| Canadian Imperial Bank of Commerce                        | CM     | Equity          |
| COMERICA, INC.  | CMA    | Equity          |
| COMMERCIAL METALS COMPANY                                 | CMC    | Equity          |
| Cheetah Mobile Inc.                                       | CMCM   | Equity          |
| COMCAST CORPORATION                                       | CMCSA  | Equity          |
| CME GROUP INC.  | CME    | Equity          |
| CHIPOTLE MEXICAN GRILL, INC.                              | CMG    | Equity          |
| CUMMINS INC.  | CMI    | Equity          |
| Compass Minerals International, Inc.                      | CMP    | Equity          |
| CIMPRESS N.V.   | CMPR   | Equity          |
| COMPASS PATHWAYS PLC                                      | CMPS   | Equity          |
| Costamare Inc.  | CMRE   | Equity          |
| CHIMERIX, INC.  | CMRX   | Equity          |
| CMS ENERGY CORPORATION                                    | CMS    | Equity          |
| COMTECH TELECOMMUNICATION                                 | CMTL   | Equity          |
| CENTENE CORP  | CNC    | Equity          |
| Concert Pharmaceuticals, Inc.                             | CNCE   | Equity          |
| CONCORD ACQUISITION CORP                                  | CND    | Equity          |
| Conduent Incorporated                                     | CNDT   | Equity          |
| Chinanet Online Holdings, Inc.                            | CNET   | Equity          |
| CNH Industrial N.V.                                       | CNHI   | Equity          |



| MIAX Options Securities as of 6/17/22         |        |                 |
|---|--------|-----------------|
| Company Name                                  | Symbol | Instrument Type |
| CANADIAN NATIONAL RAILWAY                     | CNI    | Equity          |
| Cinemark Holdings, Inc.                       | CNK    | Equity          |
| CORE & MAIN INC                               | CNM    | Equity          |
| CONMED CORP.                                  | CNMD   | Equity          |
| Cannae Holdings, Inc.                         | CNNE   | Equity          |
| CNO Financial Group, Inc.                     | CNO    | Equity          |
| CENTERPOINT ENERGY, INC.                      | CNP    | Equity          |
| CANADIAN NATURAL RESOURCES LIMITED            | CNQ    | Equity          |
| Cornerstone Building Brands, Inc.             | CNR    | Equity          |
| Consolidated Communications Holdings, Inc.    | CNSL   | Equity          |
| CONNECT BIOPHARMA HOLDINGS LIMITED            | CNTB   | Equity          |
| Century Casinos, Inc.                         | CNTY   | Equity          |
| CNX Resources Corporation                     | CNX    | Equity          |
| CONCENTRIX CORPORATION                        | CNXC   | Equity          |
| iShare MSCI China A ETF                       | CNYA   | ETF             |
| Global Cord Blood Corporation                 | CO     | Equity          |
| VITA COCO COMPANY, INC.                       | COCO   | Equity          |
| Compass Diversified Holdings LLC              | CODI   | Equity          |
| Co-Diagnostics, Inc.                          | CODX   | Equity          |
| CAPITAL ONE FINANCIAL CORPORATION             | COF    | Equity          |
| COHERENT,INC                                  | COHR   | Equity          |
| Cohu, Inc.                                    | COHU   | Equity          |
| Coinbase Global, Inc.                         | COIN   | Equity          |
| Americold Realty Trust                        | COLD   | Equity          |
| Collegium Pharmaceutical, Inc.                | COLL   | Equity          |
| COLUMBIA SPORTWEAR CO.                        | COLM   | Equity          |
| COMMSCOPE HOLDING CO, INC.                    | COMM   | Equity          |
| COMPASS INC                                   | COMP   | Equity          |
| COMSovereign Holding Corp.                    | COMS   | Equity          |
| Conn's, Inc.                                  | CONN   | Equity          |
| CONX CORP.                                    | CONX   | Equity          |
| Cooper Companies, Inc.                        | COO    | Equity          |
| TRAEGER, INC.                                 | COOK   | Equity          |
| Mr. Cooper Group Inc.                         | COOP   | Equity          |
| CONOCOPHILLIPS                                | COP    | Equity          |
| GLOBAL X COPPER MINERS ETF                    | COPX   | ETF             |
| TEUCRIUM COMMODITY TRUST CORN FUND SHARES ETF | CORN   | ETF             |
| CorEnergy Infrastructure Trust, Inc.          | CORR   | Equity          |
| Corcept Therapeutics Incorporated             | CORT   | Equity          |
| Core Scientific, Inc                          | CORZ   | Equity          |
| COSTCO WHOLESALE CORPORATION                  | COST   | Equity          |
| COTY INC.                                     | COTY   | Equity          |
| Coupa Software Incorporated                   | COUP   | Equity          |
| COURSERA, INC.                                | COUR   | Equity          |
| Cowen Group, Inc.                             | COWN   | Equity          |

| MIAX Options Securities as of 6/17/22                                      |        |                 |
|--|--------|-----------------|
| Company Name   | Symbol | Instrument Type |
| Canadian Pacific Railway Limited   | CP     | Equity          |
| Copa Holdings SA   | CPA    | Equity          |
| CAMPBELL SOUP CO   | CPB    | Equity          |
| CALLON PETROLEUM COMPANY   | CPE    | Equity          |
| UNITED STATES COPPER INDEX FUND  | CPER   | ETF             |
| Crescent Point Energy Corp.  | CPG    | Equity          |
| Capital Product Partners LP  | CPLP   | Equity          |
| COUPANG INC  | CPNG   | Equity          |
| Capri Holdings Limited (   | CPRI   | Equity          |
| COPART INC   | CPRT   | Equity          |
| CATALYST PHARMACEUTICAL PARTNES INC.                                       | CPRX   | Equity          |
| Cooper-Standard Holdings Inc.  | CPS    | Equity          |
| CPS TECHNOLOGIES CORPORATION   | CPSH   | Equity          |
| Camden Property Trust  | CPT    | Equity          |
| COMPUTE HEALTH ACQUISITION CORP.   | CPUH   | Equity          |
| Cheniere Energy Ptnrs L.P.   | CQP    | Equity          |
| Crane Co.  | CR     | Equity          |
| CRA International, Inc   | CRAI   | Equity          |
| Corbus Pharmaceuticals Holdings, Inc.                                      | CRBP   | Equity          |
| CARIBOU BIOSCIENCES, INC.  | CRBU   | Equity          |
| CALIFORNIA RESOURCES CORP  | CRC    | Equity          |
| CRICUT, INC.   | CRCT   | Equity          |
| Cardiff Oncology, Inc.   | CRDF   | Equity          |
| CARDIOL THERAPEUTICS INC.  | CRDL   | Equity          |
| Cresud Sociedad Anonima Comercial, Inmobiliaria, Financiera y Agropecuaria | CRESY  | Equity          |
| CHARGE ENTERPRISES, INC.   | CRGE   | Equity          |
| CRH plc  | CRH    | Equity          |
| COHN ROBBINS HOLDINGS CORPORATION  | CRHC   | Equity          |
| CARTER'S , INC.  | CRI    | Equity          |
| Curis Inc  | CRIS   | Equity          |
| COMSTOCK RESOURCES INC.  | CRK    | Equity          |
| Charles River Laboratories International, Inc.                             | CRL    | Equity          |
| SALESFORCE.COM, INC  | CRM    | Equity          |
| CorMedix Inc.  | CRMD   | Equity          |
| Cerence Inc.   | CRNC   | Equity          |
| Ceragon Networks Ltd.  | CRNT   | Equity          |
| Cronos Group Inc.  | CRON   | Equity          |
| CROCS, INC.  | CROX   | Equity          |
| CARPENTER TECHNOLOGY CORP.   | CRS    | Equity          |
| CRISPR Therapeutics AG   | CRSP   | Equity          |
| CORSAIR GAMING, INC.   | CRSR   | Equity          |
| CREATD, INC.   | CRTD   | Equity          |
| CRITEO SA  | CRTO   | Equity          |
| CORTEXYME, INC.  | CRTX   | Equity          |

| MIAX Options Securities as of 6/17/22      |        |                 |
|--|--------|-----------------|
| Company Name                               | Symbol | Instrument Type |
| CRUCIBLE ACQUISITION CORP                  | CRU    | Equity          |
| CIRRUS LOGIC INC.                          | CRUS   | Equity          |
| Corvus Pharmaceuticals, Inc.               | CRVS   | Equity          |
| CrowdStrike Holdings, Inc.                 | CRWD   | Equity          |
| CREDIT SUISSE GROUP AG                     | CS     | Equity          |
| CISCO SYSTEMS, INC.                        | CSCO   | Equity          |
| LoopNet, Inc. (Merger)                     | CSGP   | Equity          |
| CSG Systems International Inc.             | CSGS   | Equity          |
| Cardiovascular Systems Inc.                | CSII   | Equity          |
| Canadian Solar Inc                         | CSIQ   | Equity          |
| Centerspace                                | CSR    | Equity          |
| CHICKEN SOUP FOR THE SOUL                  | CSSE   | Equity          |
| CAESARSTONE SDOT-YAM LTD.                  | CSTE   | Equity          |
| CASTLE BIOSCIENCES, INC.                   | CSTL   | Equity          |
| CONSTELLIUM N.V                            | CSTM   | Equity          |
| Carriage Services, Inc.                    | CSV    | Equity          |
| Capital Southwest Corp                     | CSWC   | Equity          |
| CSX CORPORATION                            | CSX    | Equity          |
| CINTAS CORP.                               | CTAS   | Equity          |
| Computer Task Group Incorporated           | CTG    | Equity          |
| Cell Therapeutics, Inc. (20 Shrs)          | CTIC   | Equity          |
| Cantaloupe, Inc.                           | CTLP   | Equity          |
| Catalent, Inc.                             | CTLT   | Equity          |
| CytomX Therapeutics, Inc.                  | CTMX   | Equity          |
| Custom Truck One Source, Inc.              | CTOS   | Equity          |
| Coterra Energy Inc.                        | CTRA   | Equity          |
| CASTOR MARITIME, INC.                      | CTRM   | Equity          |
| Citi Trends, Inc.                          | CTRN   | Equity          |
| COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION | CTSH   | Equity          |
| CYTOSORBENTS CORPORATION                   | CTSO   | Equity          |
| Corteva, Inc.                              | CTVA   | Equity          |
| CITIUS PHARMACEUTICALS INC                 | CTXR   | Equity          |
| CITRIX SYSTEMS, INC.                       | CTXS   | Equity          |
| CubeSmart                                  | CUBE   | Equity          |
| CUE BIOPHARMA INC                          | CUE    | Equity          |
| Carnival Corporation & Plc                 | CUK    | Equity          |
| Culp, Inc.                                 | CULP   | Equity          |
| Direxion Daily Healthcare Bull 3X ETF      | CURE   | ETF             |
| CURIOSITYSTREAM INC                        | CURI   | Equity          |
| CURO Group Holdings Corp.                  | CURO   | Equity          |
| TORRID HOLDINGS INC.                       | CURV   | Equity          |
| CUTERA INC                                 | CUTR   | Equity          |
| Cousins Properties Inc.                    | CUZ    | Equity          |
| CUREVAC N.V.                               | CVAC   | Equity          |
| Cenovus Energy Inc.                        | CVE    | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name   | Symbol | Instrument Type |
| CIVEO CORPORATION  | CVEO   | Equity          |
| Commercial Vehicle Group, Inc.   | CVGI   | Equity          |
| CALAVO GROWERS INC.  | CVGW   | Equity          |
| CVR Energy, Inc.   | CVI    | Equity          |
| Covenant Logistics Group, Inc.   | CVLG   | Equity          |
| Commvault Systems Inc  | CVLT   | Equity          |
| CEL-SCI Corporation  | CVM    | Equity          |
| Carvana Co.  | CVNA   | Equity          |
| CVS CAREMARK CORPORATION   | CVS    | Equity          |
| Cvent Holding Corporation  | CVT    | Equity          |
| CHEVRON CORPORATION  | CVX    | Equity          |
| SPDR Barclays Convertible Secs ETF   | CWB    | ETF             |
| Direxion Shares ETF Trust - Direxion Daily CSI China Internet Index Bull 2X Shares | CWEB   | ETF             |
| Clearway Energy, Inc.  | CWEN   | Equity          |
| Clearway Energy, Inc. Class A  | CWENA  | Equity          |
| Camping World Holdings, Inc.   | CWH    | Equity          |
| Cushman Wakefield Plc  | CWK    | Equity          |
| Casella Waste Systems Inc.   | CWST   | Equity          |
| CEMEX, S.A.B. DE C.V.  | CX     | Equity          |
| SPRINKLR, INC.   | CXM    | Equity          |
| CORRECTIONS CORPORATION OF AMERICA   | CXW    | Equity          |
| WisdomTree Chinese Yuan Strategy ETF   | CYB    | ETF             |
| CYBEROPTICS CORPORATION  | CYBE   | Equity          |
| CYBERARK SOFTWARE, LTD.  | CYBR   | Equity          |
| CYCLACEL PHARMACEUTICALS, INC.   | CYCC   | Equity          |
| CYCLERION THERAPEUTICS, INC.   | CYCN   | Equity          |
| China Yuchai International Limited   | CYD    | Equity          |
| COMMUNITY HEALTH SYSTEMS, INC.   | CYH    | Equity          |
| CryoPort, Inc  | CYRX   | Equity          |
| CYTOKINETICS, INCORPORATED   | CYTK   | Equity          |
| Altamira Therapeutics Ltd. (CYTO)  | CYTO   | Equity          |
| Cyxtera Technologies, Inc.   | CYXT   | Equity          |
| Cazoo Group Ltd  | CZOO   | Equity          |
| Caesars Entertainment Corporation  | CZR    | Equity          |
| DOMINION RESOURCES   | D      | Equity          |
| DANAOS CORPORATION   | DAC    | Equity          |
| DADA NEXUS LTD.  | DADA   | Equity          |
| DAKTRONICS INC.  | DAKT   | Equity          |
| DELTA AIR LINES INC.   | DAL    | Equity          |
| Dana Holding Corporation   | DAN    | Equity          |
| YUODAO INC   | DAO    | Equity          |
| Darling International, Inc.  | DAR    | Equity          |
| DoorDash, Inc.   | DASH   | Equity          |
| ENDAVA PLC   | DAVA   | Equity          |

| MIAX Options Securities as of 6/17/22                                      |        |                 |
|--|--------|-----------------|
| Company Name   | Symbol | Instrument Type |
| DAVE INC   | DAVE   | Equity          |
| DEUTSCHE BANK AG   | DB     | Equity          |
| POWERSHARES DB AGRICULTURE   | DBA    | ETF             |
| PowerShares DB Base Metals ETF   | DBB    | ETF             |
| PoweShares DB Commodity Index Tracking Fund                                | DBC    | ETF             |
| DIEBOLD, INCORPORATED  | DBD    | Equity          |
| Designer Brands Inc. (   | DBI    | Equity          |
| PowerShares DB Oil Fund  | DBO    | ETF             |
| DigitalBridge Group, Inc.  | DBRG   | Equity          |
| DBV Technologies S.A.  | DBVT   | Equity          |
| Dropbox, Inc.  | DBX    | Equity          |
| DOCGO INC  | DCGO   | Equity          |
| Donaldson Company, Inc.  | DCI    | Equity          |
| DCP Midstream, LP  | DCP    | Equity          |
| Deciphera Pharmaceuticals, Inc.  | DCPH   | Equity          |
| DUCK CREEK TECHNOLOGIES, INC.  | DCT    | Equity          |
| DuPont de Nemours, Inc.  | DD     | Equity          |
| 3D SYSTEMS CORPORATION   | DDD    | Equity          |
| ProShares Ultra Dow30  | DDM    | ETF             |
| Datadog Inc  | DDOG   | Equity          |
| DILLARD'S INC  | DDS    | Equity          |
| DEERE & COMPANY  | DE     | Equity          |
| Easterly Government Properties, Inc.                                       | DEA    | Equity          |
| DECKERS OUTDOOR CORPORATION  | DECK   | Equity          |
| Douglas Emmett Inc   | DEI    | Equity          |
| Dell Technologies, Inc.  | DELL   | Equity          |
| WisdomTree Emerging Markets Eq Inc ETF                                     | DEM    | ETF             |
| DENBURY INC.   | DEN    | Equity          |
| Denny's Corp.  | DENN   | Equity          |
| DIAGEO PLC   | DEO    | Equity          |
| Despegar.com, Corp.  | DESP   | Equity          |
| WisdomTree Europe SmallCap Dividend Fund                                   | DFE    | ETF             |
| Direxion Daily Aerospace & Defense Bull 3X Shares Direxion Daily Aerospace | DFEN   | ETF             |
| Donnelley Financial Solutions, Inc.  | DFIN   | Equity          |
| DISCOVER FINANCIAL SERVICES  | DFS    | Equity          |
| DOLLAR GENERAL CORPORATION   | DG     | Equity          |
| Digi International Inc   | DGII   | Equity          |
| Digital Ally, Inc.   | DGLY   | Equity          |
| iShares Core Dividend Growth ETF   | DGRO   | Equity          |
| QUEST DIAGNOSTICS INC  | DGX    | Equity          |
| Diversified Healthcare Trust (   | DHC    | Equity          |
| DR HORTON INC.   | DHI    | Equity          |
| DANAHER CORPORATION  | DHR    | Equity          |
| DHT Holdings, Inc.   | DHT    | Equity          |

| MIAX Options Securities as of 6/17/22    |        |                 |
|--|--------|-----------------|
| Company Name                             | Symbol | Instrument Type |
| DHI Group, Inc.                          | DHX    | Equity          |
| SPDR DOW JONES INDUSTRIAL AVERAGE        | DIA    | ETF             |
| ProShares Ultra Oil & Gas                | DIG    | ETF             |
| DineEquity, Inc                          | DIN    | Equity          |
| HF Sinclair Corporation                  | DINO   | Equity          |
| Diodes Incorporated                      | DIOD   | Equity          |
| THE WALT DISNEY COMPANY                  | DIS    | Equity          |
| DISH NETWORK CORPORATION                 | DISH   | Equity          |
| AMPLIFY CWP ENHANCED DIVIDEND INCOME ETF | DIVO   | Equity          |
| iPath DJ-UBS Commodity Indx Tot Ret ETN  | DJP    | ETF             |
| Delek US Holdings, Inc.                  | DK     | Equity          |
| Delek Logistics Partners LP              | DKL    | Equity          |
| DraftKings Inc.                          | DKNG   | Equity          |
| DICK'S SPORTING GOODS INC.               | DKS    | Equity          |
| DOLBY LABORATORIES, INC.                 | DLB    | Equity          |
| DLH HOLDINGS CORP.                       | DLHC   | Equity          |
| Dynagas LNG Partners LP                  | DLNG   | Equity          |
| DLOCAL, LTD                              | DLO    | Equity          |
| DOLPHIN ENTERTAINMENT INC                | DLPN   | Equity          |
| Digital Realty Trust Inc                 | DLR    | Equity          |
| Duluth Holdings Inc.                     | DLTH   | Equity          |
| DOLLAR TREE, INC.                        | DLTR   | Equity          |
| DELUXE CORPORATION                       | DLX    | Equity          |
| Desktop Metal, Inc.                      | DM     | Equity          |
| DIAMEDICA THERAPEUTICS INC.              | DMAC   | Equity          |
| Dorchester Minerals LP                   | DMLP   | Equity          |
| Digimarc Corporation                     | DMRC   | Equity          |
| DERMTECH, INC.                           | DMTK   | Equity          |
| Ginkgo Bioworks Holdings, Inc. (         | DNA    | Equity          |
| Dun & Bradstreet Holdings, Inc.          | DNB    | Equity          |
| Denali Therapeutics Inc                  | DNLI   | Equity          |
| DANIMER SCIENTIFIC INC                   | DNMR   | Equity          |
| Denison Mines Corp.                      | DNN    | Equity          |
| NOW, INC.                                | DNOW   | Equity          |
| KRISPY KREME, INC                        | DNUT   | Equity          |
| DIAMOND OFFSHORE DRILLING INC            | DO     | Equity          |
| Physicians Realty Trust                  | DOC    | Equity          |
| DIGITALOCEAN HOLDINGS, INC.              | DOCN   | Equity          |
| DOXIMITY, INC                            | DOCS   | Equity          |
| DocuSign Inc.                            | DOCU   | Equity          |
| ProShares Short Dow30                    | DOG    | ETF             |
| DOGNESS INTERNATIONAL CORPORATION        | DOGZ   | Equity          |
| DOLE PLS                                 | DOLE   | Equity          |
| Doma Holdings, Inc.                      | DOMA   | Equity          |
| Domo, Inc.                               | DOMO   | Equity          |

| MIAX Options Securities as of 6/17/22                                    |        |                 |
|--|--------|-----------------|
| Company Name   | Symbol | Instrument Type |
| BRP, INC.  | DOOO   | Equity          |
| Masonite International Corporation                                       | DOOR   | Equity          |
| DOUGLAS ELLIMAN INC.   | DOUG   | Equity          |
| DOVER CORPORATION  | DOV    | Equity          |
| Dow Inc.   | DOW    | Equity          |
| AMDOCS LTD   | DOX    | Equity          |
| Douyu International Holdings Ltd   | DOYU   | Equity          |
| DRAGANFLY INC  | DPRO   | Equity          |
| Direxion Shares ETF Trust - Direxion Daily Regional Banks Bull 3X Shares | DPST   | ETF             |
| DOMINO'S PIZZA INC   | DPZ    | Equity          |
| Daqo New Energy Corp   | DQ     | Equity          |
| DRDGOLD Ltd.   | DRD    | Equity          |
| DUKE REALTY CORP.  | DRE    | Equity          |
| DARDEN RESTAURANTS, INC.   | DRI    | Equity          |
| DARIOHEALTH CORP   | DRIO   | Equity          |
| Direxion Dly S&P Oil&Gs Ex&Prd Br 3X ETF                                 | DRIP   | ETF             |
| GLOBAL X AUTONOMOUS & ELECTRIC VEHICLES ETF                              | DRIV   | ETF             |
| Direxion Daily Real Estate Bull 3x ETF                                   | DRN    | ETF             |
| DRIL-QUIP INC  | DRQ    | Equity          |
| DURECT Corporation   | DRRX   | Equity          |
| Direxion Daily Real Estate Bear 3x ETF                                   | DRV    | ETF             |
| DRIVEN BRANDS HOLDINGS INC   | DRVN   | Equity          |
| Drive Shack Inc.   | DS     | Equity          |
| DESCARTES SYSTEM GROUP INC   | DSGX   | Equity          |
| Daseke, Inc.   | DSKE   | Equity          |
| DoubleLine Income Solutions Fund   | DSL    | Equity          |
| VIANTECHNOLOGY, INC.   | DSP    | Equity          |
| DIANA SHIPPING INC   | DSX    | Equity          |
| Dynatrace Inc  | DT     | Equity          |
| DTE Energy Company   | DTE    | Equity          |
| DAVIDsTEA Inc.   | DTEA   | Equity          |
| Precision BioSciences Inc  | DTIL   | Equity          |
| ProShares UltraShort Oil & Gas   | DUG    | ETF             |
| DUKE ENERGY CORPORATION  | DUK    | Equity          |
| DUOLINGO, INC.   | DUOL   | Equity          |
| Direxion Daily Gold Miners Bear 3X Shares                                | DUST   | ETF             |
| DOUBLEVERIFY HOLDINGS INC  | DV     | Equity          |
| DaVita HealthCare Partners Inc.  | DVA    | Equity          |
| DYNAVAX TECHNOLOGIES CORPORATION   | DVAX   | Equity          |
| DEVON ENERGY CORPORATION   | DVN    | Equity          |
| ISHARES DJ SELECT DIVIDEND   | DVY    | ETF             |
| Digital World Acquisition Corp.  | DWAC   | Equity          |
| Dynex Capital, Inc.  | DX     | Equity          |
| DXC Technology Company   | DXC    | Equity          |

| MIAX Options Securities as of 6/17/22              |        |                 |
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| Company Name                                       | Symbol | Instrument Type |
| DexCom, Inc.                                       | DXCM   | Equity          |
| ProShares UltraShort Dow30 (25 Shares)             | DXD    | ETF             |
| WISDOMTREE JAPAN HEDGED EQUITY FUND                | DXJ    | ETF             |
| DESTINATION XL GROUP, INC.                         | DXLG   | Equity          |
| DXP Enterprises, Inc.                              | DXPE   | Equity          |
| Dixie Group Inc.                                   | DXYN   | Equity          |
| DYCOM INDUSTRIES INC.                              | DY     | Equity          |
| DYADIC INTERNATIONAL, INC.                         | DYAI   | Equity          |
| DZS INC.   | DZSI   | Equity          |
| ENI SpA  | E      | Equity          |
| ELECTRONIC ARTS INC.                               | EA     | Equity          |
| GrafTech International Ltd.                        | EAF    | Equity          |
| EARGO INC  | EAR    | Equity          |
| BRINKER INT'L, INC.                                | EAT    | Equity          |
| Eventbrite, Inc.                                   | EB     | Equity          |
| EBAY INC.  | EBAY   | Equity          |
| EASTERN BANKSHARES, INC.                           | EBC    | Equity          |
| ESPORTS TECHNOLOGIES INC                           | EBET   | Equity          |
| Ebix, Inc.   | EBIX   | Equity          |
| EBANG INTERNATIONAL HOLDINGS, INC.                 | EBON   | Equity          |
| Emergent Biosolutions, Inc.                        | EBS    | Equity          |
| Ecopetrol SA                                       | EC     | Equity          |
| iShares MSCI Chile ETF                             | ECH    | ETF             |
| ECOLAB INC.  | ECL    | Equity          |
| iShares MSCI China Small-Cap ETF                   | ECNS   | ETF             |
| CHANNELADVISOR CORPORATION                         | ECOM   | Equity          |
| Encore Capital Group Inc                           | ECPG   | Equity          |
| Ecovyst Inc.                                       | ECVT   | Equity          |
| CON EDISON   | ED     | Equity          |
| EDAP TMS S.A.                                      | EDAP   | Equity          |
| Direxion Daily Emerging Markets Bull 3X Shares (20 | EDC    | ETF             |
| Editas Medicine, Inc.                              | EDIT   | Equity          |
| ENDEAVOR GROUP HOLDINGS, INC.                      | EDR    | Equity          |
| NEW ORIENTAL EDUCATION & TECHNOLOGY GROUP          | EDU    | Equity          |
| VANGUARD EXTENDED DURATION TREASURY ETF            | EDV    | ETF             |
| Direxion Daily Emerging Markets Bear 3X Share      | EDZ    | ETF             |
| EURONET WORLDWIDE, INC.                            | EEFT   | Equity          |
| ISHARES MSCI EMERGING MARKETS INDEX                | EEM    | ETF             |
| ProShares UltraShort MSCI Emerging Mkts            | EEV    | ETF             |
| ISHARES MSCI EAFE INDEX                            | EFA    | ETF             |
| iShares Edge MSCI Min Vol EAFE                     | EFAV   | ETF             |
| Ellington Financial LLC                            | EFC    | Equity          |
| Enterprise Financial Services Corp                 | EFSC   | Equity          |
| EQUIFAX INC.                                       | EFX    | Equity          |
| Egain Communications Corp.                         | EGAN   | Equity          |



| MIAX Options Securities as of 6/17/22                 |        |                 |
|---|--------|-----------------|
| Company Name  | Symbol | Instrument Type |
| 8x8 Inc   | EGHT   | Equity          |
| Edgio, Inc  | LLNW   | Equity          |
| Edgio, Inc  | EGIO   | Equity          |
| EAGLE BULK SHIPPING INC                               | EGLX   | Equity          |
| ENTHUSIAST GAMING HOLDINGS INC                        | EGLX   | Equity          |
| ELDORADO GOLD CORPORATION                             | EGO    | Equity          |
| Eagle Pharmaceuticals Inc.                            | EGRX   | Equity          |
| VAALCO ENERGY INC                                     | EGY    | Equity          |
| EHANG HOLDINGS LTD. SPONSORED ADR                     | EH     | Equity          |
| Encompass Health Corporation                          | EHC    | Equity          |
| eHealth, Inc.   | EHTH   | Equity          |
| Eiger BioPharmaceuticals, Inc.                        | EIGR   | Equity          |
| EDISON INTERNATIONAL                                  | EIX    | Equity          |
| EKSO BIONICS HOLDINGS, INC.                           | EKSO   | Equity          |
| THE EST   | EL     | Equity          |
| Elanco Animal Health Incorporated                     | ELAN   | Equity          |
| e.l.f. Beauty, Inc.                                   | ELF    | Equity          |
| Electric Last Mile Solutions, Inc.                    | ELMS   | Equity          |
| ELOXX PHARMACEUTICALS, INC.                           | ELOX   | Equity          |
| Equity Lifestyle Properties, Inc.                     | ELS    | Equity          |
| ELEVATE CREDIT, INC                                   | ELVT   | Equity          |
| CALLAWAY GOLF CO                                      | ELY    | Equity          |
| ELYS GAME TECHNOLOGY, CORP.                           | ELYS   | Equity          |
| eMagin Corporation                                    | EMAN   | Equity          |
| iShares J.P. Morgan USD Emerging Markets Bond ETF     | EMB    | ETF             |
| EMBARK TECHNOLOGY, INC                                | EMBK   | Equity          |
| EMCORE Corporation                                    | EMKR   | Equity          |
| VanEck Vectors J.P. Morgan EM Local Currency Bond ETF | EMLC   | ETF             |
| EASTMAN CHEMICAL COMPANY                              | EMN    | Equity          |
| EMERSON ELECTRIC COMPANY                              | EMR    | Equity          |
| Eros Media World PLC                                  | ESGC   | Equity          |
| Eros Media World PLC                                  | EMWP   | Equity          |
| Enbridge Inc  | ENB    | Equity          |
| ENDO HEALTH SOLUTIONS INC.                            | ENDP   | Equity          |
| ENGLOBAL CORPORATION                                  | ENG    | Equity          |
| EnLink Midstream, LLC                                 | ENLC   | Equity          |
| ENLIVEX THERAPEUTICS LTD.                             | ENLV   | Equity          |
| Enphase Energy Inc.                                   | ENPH   | Equity          |
| Energizer Holdings, Inc.                              | ENR    | Equity          |
| Enersys   | ENS    | Equity          |
| ENSERVCO CORPORATION                                  | ENSV   | Equity          |
| Enanta Pharmaceuticals, Inc.                          | ENTA   | Equity          |
| Entegris, Inc.  | ENTG   | Equity          |
| ENTERA BIO LTD.                                       | ENTX   | Equity          |
| Envestnet, Inc.                                       | ENV    | Equity          |

| MIAX Options Securities as of 6/17/22      |        |                 |
|--|--------|-----------------|
| Company Name                               | Symbol | Instrument Type |
| Enova International, Inc.                  | ENVA   | Equity          |
| ENVERIC BIOSCIENCES, INC.                  | ENVB   | Equity          |
| Enovix Corporation                         | ENVX   | Equity          |
| ENZO BIOCHEM INC.                          | ENZ    | Equity          |
| EOG RESOURCES, INC.                        | EOG    | Equity          |
| Evolus, Inc.                               | EOLS   | Equity          |
| Eos Energy Enterprises, Inc.               | EOSE   | Equity          |
| Actuant Corporation                        | EPAC   | Equity          |
| EPAM Systems, Inc.                         | EPAM   | Equity          |
| Edgewell Personal Care Company             | EPC    | Equity          |
| ENTERPRISE PRODUCTS PARTNERS L.P.          | EPD    | Equity          |
| EPIPHANY TECHNOLOGY ACQUISITION CORP.      | EPHY   | Equity          |
| WisdomTree India Earning Fund              | EPI    | ETF             |
| Evolution Petroleum Corporation            | EPM    | Equity          |
| iShares MSCI Pacific ex Japan ETF          | EPP    | Equity          |
| EPR Properties                             | EPR    | Equity          |
| Essential Properties Realty Trust Inc      | EPRT   | Equity          |
| ProShares UltraShort FTSE Europe           | EPV    | ETF             |
| Epizyme, Inc.                              | EPZM   | Equity          |
| EQUITY COMMONWEALTH                        | EQC    | Equity          |
| AXA Equitable Holdings, Inc.               | EQH    | Equity          |
| EQUINIX, INC.                              | EQIX   | Equity          |
| Equinor ASA                                | EQNR   | Equity          |
| DIGINEX LIMITED                            | EQOS   | Equity          |
| EQUITY RESIDENTIAL                         | EQR    | Equity          |
| EQRx, Inc.                                 | EQRX   | Equity          |
| EQT Corporation                            | EQT    | Equity          |
| Equinox Gold Corp.                         | EQX    | Equity          |
| Enerplus Corporation                       | ERF    | Equity          |
| Ericsson                                   | ERIC   | Equity          |
| Energy Recovery Inc.                       | ERII   | Equity          |
| Embraer S.A.                               | ERJ    | Equity          |
| DIREXION DAILY ENERGY BULL 3X SHARES       | ERX    | ETF             |
| Direxionshares Daily Energy Bear 3X Shares | ERY    | ETF             |
| ERYTECH PHARMA SA                          | ERYP   | Equity          |
| Eversource Energy                          | ES     | Equity          |
| Escalade, Incorporated                     | ESCA   | Equity          |
| Element Solutions Inc.                     | ESI    | Equity          |
| ENGAGESMART INC                            | ESMT   | Equity          |
| Essent Group Ltd.                          | ESNT   | Equity          |
| Esperion Therapeutics, Inc.                | ESPR   | Equity          |
| Empire State Realty Trust, Inc.            | ESRT   | Equity          |
| Essex Property Trust Inc.                  | ESS    | Equity          |
| EAST STONE ACQUISITION CORP                | ESSC   | Equity          |
| ESTABLISHMENT LABS HOLDINGS, INC.          | ESTA   | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| Elastic N.V.                           | ESTC   | Equity          |
| EARTHSTONE ENERGY, INC.                | ESTE   | Equity          |
| Energy Transfer LP                     | ET     | Equity          |
| E.MERGE TECHNOLOGY ACQUISITION CORP    | ETAC   | Equity          |
| Ethan Allen Interiors Inc.             | ETD    | Equity          |
| EATON CORPORATION PLC                  | ETN    | Equity          |
| ETON PHARMACEUTICALS, INC              | ETON   | Equity          |
| ENTERGY CORPORATION                    | ETR    | Equity          |
| Equitrans Midstream Corp               | ETRN   | Equity          |
| Etsy,Inc.                              | ETSY   | Equity          |
| E2open Parent Holdings, Inc.           | ETWO   | Equity          |
| iShares MSCI Europe Financials ETF     | EUFN   | ETF             |
| PROSHARES ULTRASHORT EURO              | EUO    | ETF             |
| Euronav NV                             | EURN   | Equity          |
| Enviva Partners, LP                    | EVA    | Equity          |
| EVAXION BIOTECH AS                     | EVAX   | Equity          |
| Everbridge, Inc.                       | EVBG   | Equity          |
| Entravision Communications Corporation | EVC    | Equity          |
| EverQuote Inc                          | EVER   | Equity          |
| Eve Holding, Inc                       | EVEX   | Equity          |
| Evoform Biosciences, Inc.              | EVFM   | Equity          |
| EVOGENE LTD                            | EVGN   | Equity          |
| EVgo Inc.                              | EVGO   | Equity          |
| Evolent Health, Inc.                   | EVH    | Equity          |
| EVELO BIOSCIENCES, INC.                | EVLO   | Equity          |
| Evolv Technologies Holdings, Inc.      | EVLV   | Equity          |
| EVO PAYMENTS INC                       | EVOP   | Equity          |
| Evercore Partners Inc.                 | EVR    | Equity          |
| Evergy, Inc.                           | EVRG   | Equity          |
| Everi Holdings Inc.                    | EVRI   | Equity          |
| EVERTEC, Inc.                          | EVTC   | Equity          |
| Vertical Aerospace Ltd.                | EVTL   | Equity          |
| EDWARDS LIFESCIENCES CORP.             | EW     | Equity          |
| ISHARES MSCI AUSTRALIA INDEX           | EWA    | ETF             |
| EAST WEST BANCORP INC                  | EWBC   | Equity          |
| iShares Canada Index ETF               | EWC    | ETF             |
| iShares MSCI Germany Index Fund ETF    | EWG    | ETF             |
| ISHARES MSCI HONG KONG INDEX           | EWH    | ETF             |
| iShares MSCI Italy Index Fund          | EWI    | ETF             |
| ISHARES MSCI JAPAN INDEX               | EWJ    | ETF             |
| ISHARES MSCI MALAYSIA INDEX ETF        | EWM    | ETF             |
| iShares MSCI Spain Capped              | EWP    | ETF             |
| iShares MSCI France                    | EWQ    | ETF             |
| iShares MSCI Singapore                 | EWS    | ETF             |
| ISHARES TAIWAN INDEX ETF               | EWT    | ETF             |

| MIAX Options Securities as of 6/17/22    |        |                 |
|--|--------|-----------------|
| Company Name                             | Symbol | Instrument Type |
| iShares MSCI United Kingdom Index ETF    | EWU    | ETF             |
| ISHARES MSCI MEXICO CAPPED ETF           | EWV    | ETF             |
| ISHARES MSCI SOUTH KOREA CAPPED INDEX    | EWY    | ETF             |
| ISHARES MSCI BRAZIL CAPPED INDEX         | EWZ    | ETF             |
| Exact Sciences Corp.                     | EXAS   | Equity          |
| EXELON CORPORATION                       | EXC    | Equity          |
| EXELIXIS, INC.                           | EXEL   | Equity          |
| Endeavour Silver Corp.                   | EXK    | Equity          |
| ExlService Holdings, Inc.                | EXLS   | Equity          |
| EAGLE MATERIALS INC.                     | EXP    | Equity          |
| EXPEDITORS INTERNATIONAL                 | EXPD   | Equity          |
| EXPEDIA INC.                             | EXPE   | Equity          |
| eXp World Holdings, Inc.                 | EXPI   | Equity          |
| EXPRESS INC.                             | EXPR   | Equity          |
| Extra Space Storage Inc.                 | EXR    | Equity          |
| Exterran Corporation                     | EXTN   | Equity          |
| EXTREME NETWORKS, INC.                   | EXTR   | Equity          |
| National Vision Holdings, Inc.           | EYE    | Equity          |
| SECOND SIGHT MED PRODUCTS INC            | EYES   | Equity          |
| EyePoint Pharmaceuticals, Inc.           | EYPT   | Equity          |
| iShares MSCI South Africa Index          | EZA    | ETF             |
| EZCORP, INC                              | EZPW   | Equity          |
| iShares MSCI Eurozone                    | EZU    | ETF             |
| FORD MOTOR COMPANY                       | F      | Equity          |
| First American Financial Corporation     | FAF    | Equity          |
| ISHARES FALLEN ANGELS USD BOND ETF       | FALN   | ETF             |
| FIRST TRUST GLOBAL WIND ENERGY ETF       | FAN    | ETF             |
| DIAMONDBACK ENERGY, INC.                 | FANG   | Equity          |
| FARMER BROS. CO.                         | FARM   | Equity          |
| FARO TECHNOLOGIES                        | FARO   | Equity          |
| DIREXION DAILY FINANCIAL BULL 3X SHARES  | FAS    | ETF             |
| FASTENAL COMPANY                         | FAST   | Equity          |
| Fate Therapeutics, Inc.                  | FATE   | Equity          |
| Fathom Digital Manufacturing Corporation | FATH   | Equity          |
| DIREXION DAILY FINANCIAL BEAR 3X SHARES  | FAZ    | ETF             |
| Flagstar Bancorp Inc.                    | FBC    | Equity          |
| Fortune Brands Home & Security Inc.      | FBHS   | Equity          |
| FORTRESS BIOTECH, INC.                   | FBIO   | Equity          |
| FB Financial Corporation                 | FBK    | Equity          |
| First Bancorp                            | FBNC   | Equity          |
| First BanCorp                            | FBP    | Equity          |
| FORTE BIOSCIENCES INC.                   | FBRX   | Equity          |
| Franklin Covey Co.                       | FC     | Equity          |
| FUELCELL ENERGY, INC.                    | FCEL   | Equity          |
| First Commonwealth Financial Corp        | FCF    | Equity          |

| MIAX Options Securities as of 6/17/22        |        |                 |
|--|--------|-----------------|
| Company Name                                 | Symbol | Instrument Type |
| First Trust ISE-Revere Natural Gas ETF       | FCG    | ETF             |
| FTI CONSULTING, INC.                         | FCN    | Equity          |
| First Eagle Alternative Capital BDC, Inc.    | FCRD   | Equity          |
| FOCUS UNIVERSAL INC                          | FCUV   | Equity          |
| FREEMPORT-MCMORAN COPPER & GOLD INC.         | FCX    | Equity          |
| 4D MOLECULAR THERAPEUTICS, INC.              | FDMT   | Equity          |
| First Trust Dow Jones Internet ETF           | FDN    | ETF             |
| Fresh Del Monte Produce Inc.                 | FDP    | Equity          |
| FACTSET RESEARCH SYSTEMS                     | FDS    | Equity          |
| Fidus Investment Corporation                 | FDUS   | Equity          |
| FEDEX CORPORATION                            | FDX    | Equity          |
| FIRSTENERGY CORP.                            | FE     | Equity          |
| Fennec Pharmaceuticals Inc.                  | FENC   | Equity          |
| PHOENIX NEW MEDIA LIMITED                    | FENG   | Equity          |
| Fidelity MSCI Energy Index ETF               | FENY   | ETF             |
| SPDR EURO STOXX 50 ETF                       | FEZ    | ETF             |
| FutureFuel Corp                              | FF     | Equity          |
| Faraday Future Intelligent Electric Inc.     | FFIE   | Equity          |
| F5 NETWORKS, INC.                            | FFIV   | Equity          |
| FibroGen, Inc.                               | FGEN   | Equity          |
| Federated Hermes, Inc.                       | FHI    | Equity          |
| FIRST HORIZON NATIONAL CORPORATION           | FHN    | Equity          |
| FOGHORN THERAPEUTICS, INC.                   | FHTX   | Equity          |
| FAIR ISAAC CORPORATION                       | FICO   | Equity          |
| FIGS, INC.                                   | FIGS   | Equity          |
| FinVolution Group                            | FINV   | Equity          |
| GLOBAL X FINTECH ETF                         | FINX   | ETF             |
| Fidelity National Information Services, Inc. | FIS    | Equity          |
| FISERV INC                                   | FISV   | Equity          |
| FIFTH THIRD BANCORP                          | FITB   | Equity          |
| Five Below Inc                               | FIVE   | Equity          |
| DEFIANCE NEXT GEN CONNECTIVITY ETF           | FIVG   | Equity          |
| Five9, Inc.                                  | FIVN   | Equity          |
| Comfort Systems USA Inc.                     | FIX    | Equity          |
| Homology Medicines, Inc.                     | FIXX   | Equity          |
| National Beverage Corp                       | FIZZ   | Equity          |
| FRANKLIN WIRELESS CORP.                      | FKWL   | Equity          |
| FOOT LOCKER, INC.                            | FL     | Equity          |
| FLEXTRONICS LTD                              | FLEX   | Equity          |
| Fulgent Genetics, Inc.                       | FLGT   | Equity          |
| FULL HOUSE RESORTS, INC.                     | FLL    | Equity          |
| FLUENCE ENERGY, INC.                         | FLNC   | Equity          |
| FLEX LNG LTD                                 | FLNG   | Equity          |
| Fluent, Inc.                                 | FLNT   | Equity          |
| FLOWERS FOODS, INC.                          | FLO    | Equity          |

| MIAX Options Securities as of 6/17/22           |        |                 |
|---|--------|-----------------|
| Company Name                                    | Symbol | Instrument Type |
| FLUOR CORPORATION                               | FLR    | Equity          |
| Flowserve Corp.                                 | FLS    | Equity          |
| Fleetcor Technologies Inc.                      | FLT    | Equity          |
| FLUX POWER HOLDINGS, INC                        | FLUX   | Equity          |
| 1-800-Flowers.com Inc.                          | FLWS   | Equity          |
| FLYWIRE CORPORATION                             | FLYW   | Equity          |
| iShares MSCI Frontier 100 ETF                   | FM     | ETF             |
| FMC CORPORATION                                 | FMC    | Equity          |
| Farmers National Banc Corp.                     | FMNB   | Equity          |
| Fomento Economico Mexicano, S.A.B. de C.V.      | FMX    | Equity          |
| Fabrinet  | FN     | Equity          |
| F N B Corp. PA                                  | FNB    | Equity          |
| Floor & Decor Holdings, Inc.                    | FND    | Equity          |
| FIDELITY NATIONAL FINANCIAL                     | FNF    | Equity          |
| MicroSectors FANG+ ETN                          | FNGS   | ETF             |
| Funko, Inc.                                     | FNKO   | Equity          |
| Franco-Nevada Corporation                       | FNV    | Equity          |
| Finance of America Companies Inc.               | FOA    | Equity          |
| Focus Financial Partners Inc.                   | FOCS   | Equity          |
| Amicus Therapeutics, Inc.                       | FOLD   | Equity          |
| Forestar Group Inc.                             | FOR    | Equity          |
| FORGEROCK INC                                   | FORG   | Equity          |
| FormFactor Inc.                                 | FORM   | Equity          |
| FOSSIL, INC.                                    | FOSL   | Equity          |
| Shift4 Payments, Inc.                           | FOUR   | Equity          |
| (New) Fox Corporation Class A                   | FOXA   | Equity          |
| Fox Factory Holding Corp.                       | FOXF   | Equity          |
| FAR PEAK ACQUISITION CORP.                      | FPAC   | Equity          |
| First Trust Preferred Securities and Income ETF | FPE    | ETF             |
| Farmland Partners Inc.                          | FPI    | Equity          |
| First Industrial Realty Trust                   | FR     | Equity          |
| Republic First Bancorp Inc.                     | FRBK   | Equity          |
| First Republic Bank                             | FRC    | Equity          |
| Whole Earth Brands, Inc.                        | FREE   | Equity          |
| FREQUENCY THERAPEUTICS, INC.                    | FREQ   | Equity          |
| FREYR Battery                                   | FREY   | Equity          |
| FRANCHISE GROUP, INC.                           | FRG    | Equity          |
| FORGE GLOBAL HOLDINGS, INC.                     | FRGE   | Equity          |
| Fiesta Restaurant Group Inc                     | FRGI   | Equity          |
| FREEDOM HOLDING CORP.                           | FRHC   | Equity          |
| FRONTLINE LIMITED                               | FRO    | Equity          |
| JFROG LTD.                                      | FROG   | Equity          |
| Freshpet, Inc.                                  | FRPT   | Equity          |
| FRESHWORKS INC                                  | FRSH   | Equity          |
| FORESIGHT AUTONOMOUS HOLDINGS LTD               | FRSX   | Equity          |

| MIAX Options Securities as of 6/17/22                    |        |                 |
|--|--------|-----------------|
| Company Name   | Symbol | Instrument Type |
| Federal Realty Investment Trust                          | FRT    | Equity          |
| FS KKR Capital Corp.                                     | FSK    | Equity          |
| FIRST SOLAR, INC.  | FSLR   | Equity          |
| Fastly, Inc.   | FSLY   | Equity          |
| Fortuna Silver Mines Inc.                                | FSM    | Equity          |
| Fisker Inc.  | FSR    | Equity          |
| FAST ACQUISTION CORP                                     | FST    | Equity          |
| LB Foster Co.  | FSTR   | Equity          |
| Fortress Transportation and Infrastructure Investors LLC | FTAI   | Equity          |
| Farfetch Limited   | FTCH   | Equity          |
| FTC SOLAR, INC.  | FTCI   | Equity          |
| FINTECH ACQUISITION CORP                                 | FTCV   | Equity          |
| frontdoor, inc.  | FTDR   | Equity          |
| Fuel Tech inc.   | FTEK   | Equity          |
| FUTURE FINTECH GROUP INC.                                | FTFT   | Equity          |
| FATHOM HOLDINGS INC.                                     | FTHM   | Equity          |
| FMC TECHNOLOGIES, INC.                                   | FTI    | Equity          |
| Flotek Industries Inc                                    | FTK    | Equity          |
| FORTINET INC.  | FTNT   | Equity          |
| FIELD TRIP HEALTH LTD                                    | FTRP   | Equity          |
| Fortis Inc.  | FTS    | Equity          |
| Fortive Corporation                                      | FTV    | Equity          |
| FUBOTV INC.  | FUBO   | Equity          |
| FULLER (H.B.) CO   | FUL    | Equity          |
| FULCRUM THERAPEUTICS, INC.                               | FULC   | Equity          |
| Fulton Financial Corporation                             | FULT   | Equity          |
| CEDAR FAIR, L.P.   | FUN    | Equity          |
| Futu Holdings Limited                                    | FUTU   | Equity          |
| Arcimoto, Inc.   | FUV    | Equity          |
| Fiverr International Ltd.                                | FVRR   | Equity          |
| Formula One Group  | FWONA  | Equity          |
| Liberty Media Corporation Series C Liberty Formula One   | FWONK  | Equity          |
| Forward Air Corporation                                  | FWRD   | Equity          |
| CurrencyShares Australian Dollar Trust                   | FXA    | ETF             |
| CurrencyShares British Pound Sterling Trust              | FXB    | ETF             |
| CurrencyShares Canadian Dollar Trust                     | FXC    | ETF             |
| CURRENCYSHARES EURO TRUST                                | FXE    | ETF             |
| CurrencyShares Swiss Franc ETF                           | FXF    | ETF             |
| First Trust Health Care AlphaDEX ETF                     | FXH    | ETF             |
| ISHARES FTSE CHINA 25 INDEX FUND                         | FXI    | ETF             |
| F45 TRAINING HOLDINGS, INC.                              | FXLV   | Equity          |
| ProShares UltraShort FTSE China 50                       | FXP    | ETF             |
| CURRENCYSHARES JAPANESE YEN TRUST                        | FXY    | ETF             |
| FRONTIER COMMUNICATIONS PARENT, INC                      | FYBR   | Equity          |
| GENPACT LIMITED  | G      | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| Gaia, Inc.                            | GAIA   | Equity          |
| Gladstone Investment Corporation      | GAIN   | Equity          |
| GALECTIN THERAPEUTICS, INC.           | GALT   | Equity          |
| Engine Gaming and Media, Inc.         | GAME   | Equity          |
| WEDBUSH ETFMG VIDEO GAME TECH ETF     | GAMR   | ETF             |
| GAN Limited                           | GAN    | Equity          |
| StealthGas Inc                        | GASS   | Equity          |
| GATOS SILVER, INC.                    | GATO   | Equity          |
| GATX Corporation                      | GATX   | Equity          |
| Galiano Gold Inc.                     | GAU    | Equity          |
| Golub Capital BDC, Inc.               | GBDC   | Equity          |
| GREENBOX POS                          | GBOX   | Equity          |
| Global Blood Therapeutics, Inc.       | GBT    | Equity          |
| Global Business Travel Group, Inc     | GBTG   | Equity          |
| THE GREENBRIER COMPANIES, INC.        | GBX    | Equity          |
| Gannett Co., Inc.                     | GCI    | Equity          |
| Genesco Inc.                          | GCO    | Equity          |
| GCP Applied Technologies Inc          | GCP    | Equity          |
| GENERAL DYNAMICS CORPORATION          | GD     | Equity          |
| GoDaddy Inc.                          | GDDY   | Equity          |
| Golden Entertainment, Inc.            | GDEN   | Equity          |
| Green Dot Corporation                 | GDOT   | Equity          |
| GOODRX HOLDINGS INC                   | GDRX   | Equity          |
| GDS Holdings Limited                  | GDS    | Equity          |
| MARKET VECTORS GOLD MINERS ETF        | GDX    | ETF             |
| VANECK VECTORS JUNIOR GOLD MINERS ETF | GDXJ   | ETF             |
| GRID DYNAMICS HOLDINGS, INC.          | GDYN   | Equity          |
| GENERAL ELECTRIC COMPANY              | GE     | Equity          |
| Greif, Inc.                           | GEF    | Equity          |
| Gravitas Education Holdings, Inc.     | GEHI   | Equity          |
| Genesis Energy L.P.                   | GEL    | Equity          |
| Genetic Technologies Limited          | GENE   | Equity          |
| Genius Sports Limited                 | GENI   | Equity          |
| GEO Group Inc (The)                   | GEO    | Equity          |
| GEOSPACE TECHNOLOGIES CORPORATION     | GEOS   | Equity          |
| GERON CORPORATION                     | GERN   | Equity          |
| GUESS? INC.                           | GES    | Equity          |
| GEVO, INC.                            | GEVO   | Equity          |
| Griffon Corporation                   | GFF    | Equity          |
| GOLD FIELDS LTD.                      | GFI    | Equity          |
| GFL Environmental Inc.                | GFL    | Equity          |
| GLOBALFOUNDRIES INC.                  | GFS    | Equity          |
| GRUPO FINANCIERO GALICIA S.A.         | GGAL   | Equity          |
| GERDAU S.A. (ADR)                     | GGB    | Equity          |
| GRACO, INC.                           | GGG    | Equity          |



| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| GORES GUGGENHEIM INC                  | GGPI   | Equity          |
| Guardant Health, Inc.                 | GH     | Equity          |
| Greenhill & Co., Inc.                 | GHL    | Equity          |
| CGI Group Inc.                        | GIB    | Equity          |
| G-III Apparel Group Ltd               | GIII   | Equity          |
| Gildan Activewear Inc                 | GIL    | Equity          |
| GILEAD SCIENCES INC.                  | GILD   | Equity          |
| Gilat Satellite Networks Ltd.         | GILT   | Equity          |
| GENERAL MILLS, INC.                   | GIS    | Equity          |
| Glaukos Corporation                   | GKOS   | Equity          |
| Globe Life Inc.                       | GL     | Equity          |
| Gladstone Capital Corporation         | GLAD   | Equity          |
| GLOBAL ONLINE LTD                     | GLBE   | Equity          |
| GLOBUS MARITIME LIMITED               | GLBS   | Equity          |
| SPDR GOLD TRUST                       | GLD    | ETF             |
| Great Lakes Dredge & Dock             | GLDD   | Equity          |
| ProShares UltraShort Gold             | GLL    | ETF             |
| GALMED PHARMACEUTICALS LTD.           | GLMD   | Equity          |
| Golar LNG Ltd                         | GLNG   | Equity          |
| Globant S.A.                          | GLOB   | Equity          |
| GasLog Partners LP                    | GLOP   | Equity          |
| Global Partners LP                    | GLP    | Equity          |
| Galapagos NV                          | GLPG   | Equity          |
| Gaming and Leisure Properties Inc     | GLPI   | Equity          |
| Greenlight Capital Re, Ltd.           | GLRE   | Equity          |
| Glatfelter Corporation                | GLT    | Equity          |
| CORNING INC.                          | GLW    | Equity          |
| GlycoMimetics, Inc.                   | GLYC   | Equity          |
| GENERAL MOTORS COMPANY                | GM     | Equity          |
| Genmab A/S                            | GMAB   | Equity          |
| ESPORTS ENTERTAINMENT GROUP           | GMBL   | Equity          |
| GAMIDA CELL LTD                       | GMDA   | Equity          |
| GAMESTOP CORPORATION                  | GME    | Equity          |
| GLOBUS MEDICAL, INC.                  | GMED   | Equity          |
| Global Medical REIT Inc.              | GMRE   | Equity          |
| GMS Inc.                              | GMS    | Equity          |
| Gemini Therapeutics, Inc.             | GMTX   | Equity          |
| Genie Energy Ltd.                     | GNE    | Equity          |
| GENCO SHIPPING & TRADING LTD          | GNK    | Equity          |
| Global Net Lease, Inc.                | GNL    | Equity          |
| GREENLANE HOLDINGS, INC               | GNLN   | Equity          |
| Genprex, Inc.                         | GNPX   | Equity          |
| Generac Holdings Inc                  | GNRC   | Equity          |
| Genasys Inc.                          | GNSS   | Equity          |
| GENTEX CORP.                          | GNTX   | Equity          |

| MIAX Options Securities as of 6/17/22                                |        |                 |
|--|--------|-----------------|
| Company Name   | Symbol | Instrument Type |
| Genius Brands International, Inc.                                    | GNUS   | Equity          |
| GENWORTH FINANCIAL INC.  | GNW    | Equity          |
| Grocery Outlet Holding Corp  | GO     | Equity          |
| GOHEALTH INC   | GOCO   | Equity          |
| 1847 GOEDEKER INC  | GOED   | Equity          |
| Canoo Inc.   | GOEV   | Equity          |
| Golden Ocean Group Limited   | GOTU   | Equity          |
| GOGO, INC.   | GOGO   | Equity          |
| GOL LINHAS AEREAS INTELIGENTIEGOL LINHAS AEREAS INTELIGENTIES SAS SA | GOL    | Equity          |
| Barrick Gold Corporation   | GOLD   | Equity          |
| Gladstone Commercial Corporation                                     | GOOD   | Equity          |
| Alphabet Inc. Class C  | GOOG   | Equity          |
| Alphabet Inc. Class A  | GOOGL  | Equity          |
| Canada Goose Holdings Inc.   | GOOS   | Equity          |
| Gold Resource Corporation  | GORO   | Equity          |
| Gossamer Bio Inc   | GOSS   | Equity          |
| GSX Techedu Inc.   | GOTU   | Equity          |
| GREENPOWER MOTOR COMPANY INC.  | GP     | Equity          |
| GENUINE PARTS  | GPC    | Equity          |
| GROUP 1 AUTOMOTIVE INC.  | GPI    | Equity          |
| Graphic Packaging Holding Company                                    | GPK    | Equity          |
| Granite Point Mortgage Trust Inc.                                    | GPMT   | Equity          |
| GLOBAL PAYMENTS INC.   | GPN    | Equity          |
| GREEN PLAINS PARTNERS LP   | GPP    | Equity          |
| Green Plains Renewable Energy, Inc.                                  | GPRE   | Equity          |
| Geopark Ltd  | GPRK   | Equity          |
| GOPRO, INC.  | GPRO   | Equity          |
| GAP INC.   | GPS    | Equity          |
| Grab Holdings Limited  | GRAB   | Equity          |
| GRAYBUG VISION INC   | GRAY   | Equity          |
| Green Brick Partners, Inc.   | GRBK   | Equity          |
| GREENIDGE GENERATION HOLDINGS INC                                    | GREE   | Equity          |
| Global X MSCI Greece ETF   | GREK   | ETF             |
| Grifols SA   | GRFS   | Equity          |
| GARMIN LTD.  | GRMN   | Equity          |
| GROM SOCIAL ENTERPRISES, INC.  | GROM   | Equity          |
| U.S. Global Investors, Inc.  | GROW   | Equity          |
| GOLD ROYALTY CORP.   | GROY   | Equity          |
| GROUPON, INC.  | GRPN   | Equity          |
| GRITSTONE ONCOLOGY INC   | GRTS   | Equity          |
| GALERA THERAPEUTICS, INC.  | GRTX   | Equity          |
| GrowGeneration Corp.   | GRWG   | Equity          |
| THE GOLDMAN SACHS GROUP, INC.  | GS     | Equity          |
| Globalstar, Inc  | GSAT   | Equity          |

| MIAX Options Securities as of 6/17/22                     |        |                 |
|---|--------|-----------------|
| Company Name  | Symbol | Instrument Type |
| GOLDMAN SACHS BDC, INC                                    | GSBD   | Equity          |
| iShares S&P GSCI Commodity Indexed Trust                  | GSG    | ETF             |
| Goosehead Insurance, Inc                                  | GSHD   | Equity          |
| GLAXOSMITHKLINE PLC                                       | GSK    | Equity          |
| GLOBAL SHIP LEASE, INC.                                   | GSL    | Equity          |
| Globe Specialty Metals Inc                                | GSM    | Equity          |
| GOODYEAR TIRE & RUBBER COMPANY                            | GT     | Equity          |
| GT BIOPHARMA INC  | GTBP   | Equity          |
| Gran Tierra Energy Inc.                                   | GTE    | Equity          |
| Gates Industrial Corporation plc                          | GTES   | Equity          |
| G1 Therapeutics, Inc.                                     | GTHX   | Equity          |
| Good Times Restaurants Inc.                               | GTIM   | Equity          |
| GITLAB INC  | GTLB   | Equity          |
| Chart Industries Inc                                      | GTLS   | Equity          |
| Gray Television, Inc.                                     | GTN    | Equity          |
| Garrett Motion Inc.                                       | GTX    | Equity          |
| Getty Realty Corp.  | GTY    | Equity          |
| GTY TECHNOLOGY HOLDINGS INC                               | GTYH   | Equity          |
| Direxion Dly S&P Oil&Gs Ex&Prd BI 3X ETF                  | GUSH   | ETF             |
| Granite Construction Incorporated                         | GVA    | Equity          |
| ESS Tech, Inc.  | GWH    | Equity          |
| Guidewire Software, Inc.                                  | GWRE   | Equity          |
| GRAINGER, W.W. INC.                                       | GWV    | Equity          |
| Global X MSCI Colombia ETF                                | GXG    | ETF             |
| GXO LOGISTICS INC   | GXO    | Equity          |
| Hyatt Hotels Corporation                                  | H      | Equity          |
| Hawaiian Holdings, Inc.                                   | HA     | Equity          |
| HEALTH ASSURANCE ACQUISITION CORPRP                       | HAAC   | Equity          |
| PureFunds ISE Cyber Security ETF                          | HACK   | ETF             |
| Haemonetics Corporation                                   | HAE    | Equity          |
| THE HAIN CELESTIAL GROUP, INC.                            | HAIN   | Equity          |
| HALLIBURTON COMPANY                                       | HAL    | Equity          |
| Hallmark Financial Services, Inc.                         | HALL   | Equity          |
| Halozyne Therapeutics Inc.                                | HALO   | Equity          |
| Harpoon Therapeutics, Inc.                                | HARP   | Equity          |
| HASBRO INC.   | HAS    | Equity          |
| Hannon Armstrong Sustainable Infrastructure Capital, Inc. | HASI   | Equity          |
| HAYWARD HOLDINGS INC                                      | HAYW   | Equity          |
| HUNTINGTON BANCSHARES INCORPORATED                        | HBAN   | Equity          |
| Hanesbrands Inc.  | HBI    | Equity          |
| Harvard Bioscience, Inc.                                  | HBIO   | Equity          |
| HudBay Minerals, Inc.                                     | HBM    | Equity          |
| HCA HOLDINGS, INC.  | HCA    | Equity          |
| Health Catalyst, Inc.                                     | HCAT   | Equity          |
| Warrior Met Coal, Inc.                                    | HCC    | Equity          |

| MIAX Options Securities as of 6/17/22           |        |                 |
|---|--------|-----------------|
| Company Name                                    | Symbol | Instrument Type |
| HCI Group, Inc.                                 | HCI    | Equity          |
| HENNESSY CAPITAL INVESTMENT                     | HCIC   | Equity          |
| HUTCHMED (China) Limited                        | HCM    | Equity          |
| HASHICORP, INC.                                 | HCP    | Equity          |
| Healthcare Services Group, Inc.                 | HCSG   | Equity          |
| THE HOME DEPOT, INC.                            | HD     | Equity          |
| HDFC BANK LTD                                   | HDB    | Equity          |
| AdvisorShares Ranger Equity Bear ETF            | HDGE   | ETF             |
| Hudson Technologies, Inc.                       | HDSN   | Equity          |
| iShares High Dividend Equity Fund               | HDV    | ETF             |
| Hawaiian Electric Industries Inc.               | HE     | Equity          |
| Turtle Beach Corporation                        | HEAR   | Equity          |
| WisdomTree Europe Hedged Equity Fund            | HEDJ   | ETF             |
| H&E Equipment Services, Inc.                    | HEES   | Equity          |
| HEICO Corporation                               | HEI    | Equity          |
| HELEN OF TROY LTD                               | HELE   | Equity          |
| Holly Energy Partners L.P.                      | HEP    | Equity          |
| HEPION PHARMACEUTICALS, INC.                    | HEPA   | Equity          |
| GLOBAL X VIDEO GAMES & ESPORTS ETF              | HERO   | ETF             |
| HESS CORPORATION                                | HES    | Equity          |
| Hess Midstream LP                               | HESM   | Equity          |
| HEXO Corp.                                      | HEXO   | Equity          |
| HUMANIGEN INC                                   | HGEN   | Equity          |
| Hilton Grand Vacations Inc.                     | HGV    | Equity          |
| The Howard Hughes Corporation                   | HHC    | Equity          |
| Hillenbrand Inc                                 | HI     | Equity          |
| Hibbett Sports Inc                              | HIBB   | Equity          |
| DIREXION DAILY S&P 500 HIGH BETA BEAR 3X SHARES | HIBS   | ETF             |
| THE HARTFORD FINANCIAL SERVICES GROUP, INC.     | HIG    | Equity          |
| Huntington Ingalls Industries, Inc.             | HII    | Equity          |
| Hims & Hers Health, Inc.                        | HIMS   | Equity          |
| Himax Technologies, Inc.                        | HIMX   | Equity          |
| Hippo Holdings Inc.                             | HIPO   | Equity          |
| HIGH TIDE, INC.                                 | HITI   | Equity          |
| HIVE BLOCKCHAIN TECHNOLOGIES LTD.               | HIVE   | Equity          |
| HIGHWOODS PROPERTIES, INC.                      | HIW    | Equity          |
| DIREXION HYDROGEN ETF                           | HJEN   | ETF             |
| HECLA MINING COMPANY                            | HL     | Equity          |
| HERBALIFE LTD.                                  | HLF    | Equity          |
| Heliogen, Inc.                                  | HLGN   | Equity          |
| Harmonic Inc                                    | HLIT   | Equity          |
| HOLLEY INC.                                     | HLLY   | Equity          |
| Hillman Solutions Corporation                   | HLMN   | Equity          |
| HILTON WORLDWIDE HOLDINGS INC.                  | HLT    | Equity          |
| CUE HEALTH INC                                  | HLTH   | Equity          |

| MIAX Options Securities as of 6/17/22       |        |                 |
|---|--------|-----------------|
| Company Name                                | Symbol | Instrument Type |
| HELIX ENERGY SOLUTIONS GROUP INC            | HLX    | Equity          |
| HONDA MOTOR COMPANY LTD                     | HMC    | Equity          |
| HARMONY GOLD MINING COMPANY LIMITED         | HMY    | Equity          |
| HUANENG POWER INTERNATIONAL, INC. ADS       | HNP    | Equity          |
| THE HONEST COMPANY, INC                     | HNST   | Equity          |
| HALL OF FAME RESORT & ENTERTAINMENT COMPANY | HOFV   | Equity          |
| HARLEY-DAVIDSON, INC.                       | HOG    | Equity          |
| Hollysys Automation Technologies Ltd.       | HOLI   | Equity          |
| HOLOGIC, INC.                               | HOLX   | Equity          |
| Home Bancshares, Inc.                       | HOMB   | Equity          |
| HONEYWELL INTERNATIONAL INC.                | HON    | Equity          |
| HARBORONE BANCORP INC                       | HONE   | Equity          |
| Robinhood Markets, Inc.                     | HOOD   | Equity          |
| HOOKIPA PHARMA, INC.                        | HOOK   | Equity          |
| Anywhere Real Estate Inc.                   | HOUS   | Equity          |
| Anywhere Real Estate Inc.                   | RLGY   | Equity          |
| WEREWOLF THERAPEUTICS, INC.                 | HOWL   | Equity          |
| HELMERICH & PAYNE INC                       | HP     | Equity          |
| Hewlett Packard Enterprise Company          | HPE    | Equity          |
| Hudson Pacific Properties Inc.              | HPP    | Equity          |
| HP Inc.                                     | HPQ    | Equity          |
| HealthEquity, Inc.                          | HQY    | Equity          |
| Healthcare Realty Trust Incorporated        | HR     | Equity          |
| H&R BLOCK, INC.                             | HRB    | Equity          |
| Herc Holdings Inc.                          | HRI    | Equity          |
| HORMEL FOODS CORPORATION                    | HRL    | Equity          |
| Harrow Health Inc                           | HROW   | Equity          |
| Heritage Insurance Holdings, Inc.           | HRTG   | Equity          |
| Heron Therapeutics, Inc.                    | HRTX   | Equity          |
| Horizon Technology Finance Corp             | HRZN   | Equity          |
| HSBC HOLDINGS PLC                           | HSBC   | Equity          |
| Harsco Corporation                          | HSC    | Equity          |
| Henry Schein, Inc.                          | HSIC   | Equity          |
| Heidrick & Struggles International Inc.     | HSII   | Equity          |
| Host Hotels & Resorts                       | HST    | Equity          |
| HealthStream Inc                            | HSTM   | Equity          |
| HERSHEY CO THE                              | HSY    | Equity          |
| Hersha Hospitality Trust                    | HT     | Equity          |
| Healthcare Trust of America Inc.            | HTA    | Equity          |
| Hercules Capital, Inc.                      | HTGC   | Equity          |
| Hilltop Holdings Inc.                       | HTH    | Equity          |
| China Lodging Group, Limited                | HTHT   | Equity          |
| HEARTLAND EXPRESS, INC.                     | HTLD   | Equity          |
| FUSION FUEL GREEN PLC                       | HTOO   | Equity          |
| Hertz Global Holdings, Inc.                 | HTZ    | Equity          |

| MIAX Options Securities as of 6/17/22            |        |                 |
|--|--------|-----------------|
| Company Name                                     | Symbol | Instrument Type |
| Hub Group, Inc.                                  | HUBG   | Equity          |
| HubSpot, Inc.                                    | HUBS   | Equity          |
| FSD Pharma Inc.                                  | HUGE   | Equity          |
| USHG ACQUISITION CORP. CLASS A                   | HUGS   | Equity          |
| HUMANA INC.                                      | HUM    | Equity          |
| Humacyte, Inc.                                   | HUMA   | Equity          |
| HUNTSMAN CORPORATION                             | HUN    | Equity          |
| Huron Consulting Group, Inc.                     | HURN   | Equity          |
| HOUSTON AMERICAN ENERGY CORPORATION              | HUSA   | Equity          |
| HUT 8 MINING CORP                                | HUT    | Equity          |
| HUYA Inc.  | HUYA   | Equity          |
| Haverty Furniture Companies, Inc                 | HVT    | Equity          |
| Hancock Whitney Corporation                      | HWC    | Equity          |
| Howmet Aerospace Inc                             | HWM    | Equity          |
| HEXCEL CORPORATION                               | HXL    | Equity          |
| Market Vectors High Yield Municipal Index ETF    | HYD    | ETF             |
| HYDROFARM HOLDINGS GROUP, INC                    | HYFM   | Equity          |
| ISHARES IBOXX \$ HIGH YIELD CORPORATE BOND       | HYG    | ETF             |
| AdvisorShares Peritus High Yield ETF             | HYLD   | ETF             |
| Hyllion Holdings Corporation                     | HYLN   | Equity          |
| HYCROFT MINING HOLDING                           | HYMC   | Equity          |
| HyreCar Inc.                                     | HYRE   | Equity          |
| Hyzon Motors Inc.                                | HYZN   | Equity          |
| Horizon Global Corporation                       | HZN    | Equity          |
| Horizon Pharma, Inc.                             | HZNP   | Equity          |
| MARINEMAX , INC.                                 | HZO    | Equity          |
| HORIZON ACQUISITION CORP. II                     | HZON   | Equity          |
| IAA, Inc.  | IAA    | Equity          |
| IAC/InterActiveCorp                              | IAC    | Equity          |
| IAMGOLD CORPORATION                              | IAG    | Equity          |
| iShares U.S. Broker-Dealers & Sec. Exchanges ETF | IAI    | ETF             |
| Integra LifeSciences Holdings Corporation        | IART   | Equity          |
| iShares US Regional Banks                        | IAT    | ETF             |
| iShares Gold Trust                               | IAU    | ETF             |
| ISHARES NASDAQ BIOTECHNOLOGY                     | IBB    | ETF             |
| Independent Bank Corp/MI                         | IBCP   | Equity          |
| iBio, Inc.                                       | IBIO   | Equity          |
| Interactive Brokers Group Inc                    | IBKR   | Equity          |
| INTERNATIONAL BUSINESS MACHINES CORPORATION      | IBM    | Equity          |
| ICICI BANK LIMITED                               | IBN    | Equity          |
| Installed Building Products, Inc.                | IBP    | Equity          |
| ImmunityBio, Inc.                                | IBRX   | Equity          |
| iCAD Inc.  | ICAD   | Equity          |
| Intercontinental Exchange Inc                    | ICE    | Equity          |
| ISHARES COHEN & STEERS REALTY MAJORS INDEX FUND  | ICF    | ETF             |

| MIAX Options Securities as of 6/17/22              |        |                 |
|--|--------|-----------------|
| Company Name                                       | Symbol | Instrument Type |
| Ichor Holdings, Ltd.                               | ICHR   | Equity          |
| ICL GROUP LTD.ICL GROUP LTD.                       | ICL    | Equity          |
| iClick Interactive Asia Group Limited              | ICLK   | Equity          |
| iShares Global Clean Energy ETF                    | ICLN   | ETF             |
| ICON Public Limited Company                        | ICLR   | Equity          |
| INTERCEPT PHARMACEUTICALS, INC.                    | ICPT   | Equity          |
| ICU MEDICAL, INC.                                  | ICUI   | Equity          |
| ICOSAVAX, INC.                                     | ICVX   | Equity          |
| IDACORP, INC.                                      | IDA    | Equity          |
| INTERDIGITAL, INC.                                 | IDCC   | Equity          |
| Ideanomics, Inc.                                   | IDEX   | Equity          |
| Intellicheck, Inc.                                 | IDN    | Equity          |
| IDERA PHARMACEUTICALS, INC.                        | IDRA   | Equity          |
| ISHARES SELF-DRIVING EV AND TECH ETF               | IDRV   | ETF             |
| IDT Corporation                                    | IDT    | Equity          |
| iShares International Select Dividend ETF          | IDV    | ETF             |
| IDEXX Laboratories, Inc.                           | IDXX   | Equity          |
| IDEAYA BIOSCIENCES, INC.                           | IDYA   | Equity          |
| INFRASTRUCTURE AND ENERGY ALTERNATIVES, INC.       | IEA    | Equity          |
| iShares 7 -10 Year Treasury Bond ETF               | IEF    | ETF             |
| iShares Core MSCI EAFE ETF                         | IEFA   | ETF             |
| iShares 3-7 Year Treasury Bond ETF                 | IEI    | ETF             |
| iShares Core MSCI Emerging Markets                 | IEMG   | ETF             |
| iShares U.S. Oil&Gas Explor&Prodn                  | IEO    | ETF             |
| ICAHN ENTERPRISES, L.P.                            | IEP    | Equity          |
| iShares Europe                                     | IEV    | ETF             |
| IDEX Corporation                                   | IEX    | Equity          |
| iShares U.S. Oil Equipment&Services                | IEZ    | ETF             |
| International Flavors & Fragrances Inc.            | IFF    | Equity          |
| InflaRx N.V.                                       | IFRX   | Equity          |
| IG ACQUISITION CORP                                | IGAC   | Equity          |
| iSharesTrustiShares 5-10 Yr Inv Grade Corp BondETF | IGIB   | ETF             |
| iShares Expanded Tech Sector ETF                   | IGM    | ETF             |
| IGM Biosciences, Inc                               | IGMS   | Equity          |
| iShares North American Tech-Multimd Ntwk           | IGN    | ETF             |
| International Game Technology Plc                  | IGT    | Equity          |
| Tech-Software Sector ETF                           | IGV    | ETF             |
| iShares U.S. Medical Devices ETF                   | IHI    | ETF             |
| iHeartMedia Inc                                    | IHRT   | Equity          |
| INSTEEL INDUSTRIES INC                             | IIIN   | Equity          |
| I3 VERTICALS INC                                   | IIIV   | Equity          |
| Innovative Industrial Properties, Inc.             | IIPR   | Equity          |
| II-VI INCORPORATED                                 | IIVI   | Equity          |
| iShares Core S&P Mid-Cap ETF                       | IJH    | ETF             |
| iShares Core S&P Small-Cap ETF                     | IJR    | ETF             |

| MIAX Options Securities as of 6/17/22        |        |                 |
|--|--------|-----------------|
| Company Name                                 | Symbol | Instrument Type |
| iShares S&P Small-Cap 600 Value              | IJS    | ETF             |
| iShares Latin America 40                     | ILF    | ETF             |
| ILLUMINA INC.                                | ILMN   | Equity          |
| I-MAB  | IMAB   | Equity          |
| IMAX CORPORATION                             | IMAX   | Equity          |
| IMEDIA BRANDS, INC                           | IMBI   | Equity          |
| IM CANNABIS CORP                             | IMCC   | Equity          |
| IMMUNOGEN INC                                | IMGN   | Equity          |
| Impac Mortgage Holdings Inc.                 | IMH    | Equity          |
| Ingles Markets, Incorporated                 | IMKTA  | Equity          |
| IMMUTEP LTD                                  | IMMP   | Equity          |
| IMMERSION CORP                               | IMMR   | Equity          |
| IMMUNOME, INC                                | IMNM   | Equity          |
| IMPERIAL OIL LTD.                            | IMO    | Equity          |
| AEA BRIDGES IMPACT CORPORATION               | IMPX   | Equity          |
| IMMATICS N.V.                                | IMTX   | Equity          |
| Immunic, Inc                                 | IMUX   | Equity          |
| IMV Inc                                      | IMV    | Equity          |
| IMMUNOVANT INC                               | IMVT   | Equity          |
| INTERNATIONAL MONEY EXPRESS, INC.            | IMXI   | Equity          |
| INHIBRX INC                                  | INBX   | Equity          |
| INCYTE GENOMICS INC                          | INCY   | Equity          |
| iShares MSCI India                           | INDA   | ETF             |
| indie Semiconductor, Inc                     | INDI   | Equity          |
| Direxion Daily India Bull 3x ETF             | INDL   | ETF             |
| INFORMATICA, INC.                            | INFA   | Equity          |
| INFINITY PHARMACEUTICALS, INC.               | INFI   | Equity          |
| HORIZON KINETICS INFLATION BENEFICIARIES ETF | INFL   | ETF             |
| Infinera Corporation                         | INFN   | Equity          |
| INFOSYS LTD.                                 | INFY   | Equity          |
| ING GROEP N.V.                               | ING    | Equity          |
| Inogen, Inc.                                 | INGN   | Equity          |
| Ingredion Incorporated                       | INGR   | Equity          |
| IMMUNE BIO INC                               | INMB   | Equity          |
| InMode Ltd.                                  | INMD   | Equity          |
| Summit Hotel Properties, Inc.                | INN    | Equity          |
| INNOVAGE HOLDING CORP                        | INNV   | Equity          |
| INOVIO PHARMACEUTICALS, INC.                 | INO    | Equity          |
| Innodata Inc                                 | INOD   | Equity          |
| INSPIRED ENTERTAINMENT, INC.                 | INSE   | Equity          |
| Inseego Corporation                          | INSG   | Equity          |
| Insmed, Inc.                                 | INSM   | Equity          |
| Inspire Medical Systems Inc                  | INSP   | Equity          |
| International Seaways, Inc                   | INSW   | Equity          |
| World Fuel Services Corporation              | INT    | Equity          |



| MIAX Options Securities as of 6/17/22             |        |                 |
|---|--------|-----------------|
| Company Name                                      | Symbol | Instrument Type |
| INTEL CORPORATION                                 | INTC   | Equity          |
| INTEST CORPORATION                                | INTT   | Equity          |
| INTUIT CORP                                       | INTU   | Equity          |
| INTRUSION INC                                     | INTZ   | Equity          |
| Innoviva, Inc.                                    | INVA   | Equity          |
| Identiv Inc.                                      | INVE   | Equity          |
| Invitation Homes Inc.                             | INVH   | Equity          |
| Innoviz Technologies Ltd.                         | INVZ   | Equity          |
| IonQ, Inc   | IONQ   | Equity          |
| Ionis Pharmaceuticals, Inc.                       | IONS   | Equity          |
| SAMSARA, INC.                                     | IOT    | Equity          |
| Iovance Biotherapeutics, Inc.                     | IOVA   | Equity          |
| INTERNATIONAL PAPER COMPANY                       | IP     | Equity          |
| IMMUNOPRECISE ANTIBODIES LTD.                     | IPA    | Equity          |
| THE INTERPUBLIC GROUP OF COMPANIES, INC.          | IPG    | Equity          |
| IPG Photonics Corp                                | IPGP   | Equity          |
| Intrepid Potash, Inc.                             | IPI    | Equity          |
| Renaissance IPO ETF                               | IPO    | ETF             |
| SOCIAL CAPITAL HEDOSOPHIA HOLDINGS CORPORATION IV | IPOD   | Equity          |
| SOCIAL CAPITAL HEDOSOPHIA HOLDINGS CORPORATION VI | IPOF   | Equity          |
| iQIYI, Inc.                                       | IQ     | Equity          |
| IQVIA Holdings Inc.                               | IQV    | Equity          |
| INGERSOLL-RAND PLC                                | IR     | Equity          |
| iShares Robo and Artificial Intel Multisector ETF | IRBO   | ETF             |
| iRobot Corporation                                | IRBT   | Equity          |
| Iridium Communications Inc.                       | IRDM   | Equity          |
| IRON MOUNTAIN INC. (elec div)                     | IRM    | Equity          |
| IronNet, Inc.                                     | IRNT   | Equity          |
| Independence Realty Trust, Inc.                   | IRT    | Equity          |
| iRhythm Technologies, Inc                         | IRTC   | Equity          |
| Ironwood Pharmaceuticals Inc                      | IRWD   | Equity          |
| ironSource Ltd.                                   | IS     | Equity          |
| IVERIC bio, Inc.                                  | ISEE   | Equity          |
| INSPIRATO INCORPORATED                            | ISPO   | Equity          |
| INTUITIVE SURGICAL, INC.                          | ISRG   | Equity          |
| ISUN, INC.  | ISUN   | Equity          |
| Gartner, Inc.                                     | IT     | Equity          |
| iShares US Aerospace and Defense ETF              | ITA    | ETF             |
| ISHARES U.S. HOME CONSTRUCTION ETF                | ITB    | ETF             |
| Intra-Cellular Therapies, Inc.                    | ITCI   | Equity          |
| Integer Holdings Corporation                      | ITGR   | Equity          |
| Iteris, Inc.                                      | ITI    | Equity          |
| iTeos Therapeutics, Inc.                          | ITOS   | Equity          |
| iShares Core S&P Total U.S. Stock Market ETF      | ITOT   | ETF             |
| IT Tech Packaging, Inc.                           | ITP    | Equity          |

| MIAX Options Securities as of 6/17/22          |        |                 |
|--|--------|-----------------|
| Company Name                                   | Symbol | Instrument Type |
| ITRON, INC.                                    | ITRI   | Equity          |
| ITT Inc.                                       | ITT    | Equity          |
| ITAU UNIBANCO HOLDING S.A.                     | ITUB   | Equity          |
| ILLINOIS TOOL WORKS INC.                       | ITW    | Equity          |
| Intevac Inc.                                   | IVAC   | Equity          |
| Invacare Corporation                           | IVC    | Equity          |
| iShares S&P 500 Value Index Fund               | IVE    | ETF             |
| QUADRATIC INTEREST RATE VOL. AND INFLATION ETF | IVOL   | ETF             |
| INVESCO MORTGAGE CAPITAL INCCOM                | IVR    | Equity          |
| iShares Core S&P 500 ETF                       | IVV    | ETF             |
| iShares S&P 500 Growth ETF                     | IVW    | ETF             |
| Invesco Ltd                                    | IVZ    | Equity          |
| iShares Russell 1000                           | IWB    | ETF             |
| iSHARES RUSSELL MICROCAP INDEX                 | IWC    | ETF             |
| ISHARES RUSSELL 1000 VALUE ETF                 | IWD    | ETF             |
| iShares Russell 1000 Growth ETF                | IWF    | ETF             |
| ISHARES RUSSELL 2000 INDEX                     | IWM    | ETF             |
| ISHRS RUSSELL 2000 VALUE ETF                   | IWN    | ETF             |
| ISHRS RUSSELL 2000 GROWTH INDX                 | IWO    | ETF             |
| iShares Russell Midcap Growth Index Fund ETF   | IWP    | ETF             |
| ISHARES RUSSELL MIDCAP INDEX FUND              | IWR    | ETF             |
| ISHARES RUSSELL MIDCAP VALUE INDEX FUND        | IWS    | ETF             |
| ISHARES RUSSELL 3000 INDX                      | IWV    | ETF             |
| ISHARES DJ US ENERGY SECTOR ETF                | IYE    | ETF             |
| ISHARES DOW JONES U.S. BASIC MATERIALS SECT    | IYM    | ETF             |
| ISHARES DOW JONES US REAL ESTATE               | IYR    | ETF             |
| ISHARES DOW JONES TRANSPORTATION AVERAGE       | IYT    | ETF             |
| iShares US Technology                          | IYW    | ETF             |
| iShares US Telecommunications                  | IYZ    | ETF             |
| IZEA WORLDWIDE, INC.                           | IZEA   | Equity          |
| Jacobs Engineering Group Inc.                  | J      | Equity          |
| JACK IN THE BOX, INC                           | JACK   | Equity          |
| JAGUAR HEALTH, INC.                            | JAGX   | Equity          |
| Jamf Holding Corp                              | JAMF   | Equity          |
| Jazz Pharmaceuticals Plc                       | JAZZ   | Equity          |
| JB HUNT TRANSPORT SERVICES INC.                | JBHT   | Equity          |
| Janus International Group, Inc.                | JBI    | Equity          |
| JABIL CIRCUIT INC.                             | JBL    | Equity          |
| JETBLUE AIRWAYS CORPORATI                      | JBLU   | Equity          |
| John Bean Technologies Corporation             | JBT    | Equity          |
| Johnson Controls International plc             | JCI    | Equity          |
| JD.COM, INC.                                   | JD     | Equity          |
| DIREXION DAILY JR GLD MNRS BEAR 3X ETF         | JDST   | ETF             |
| Jefferies Financial Group Inc.                 | JEF    | Equity          |
| JELD-WEN Holding, Inc                          | JELD   | Equity          |

| MIAX Options Securities as of 6/17/22                     |        |                 |
|---|--------|-----------------|
| Company Name  | Symbol | Instrument Type |
| JPMORGAN EQUITY PREMIUM INCOME ETF                        | JEPI   | ETF             |
| US Global Jets ETF  | JETS   | ETF             |
| JIAYIN GROUP INC.   | JFIN   | Equity          |
| AURORA MOBILE LTD.  | JG     | Equity          |
| Janus Henderson Group Plc                                 | JHG    | Equity          |
| IPATH B BLOOMBERG COPPER TOTAL RETURN ETN                 | JJC    | ETF             |
| IPATH SERIES B BLOOMBERG NICKEL SUBINDEX TOTAL RETURN ETN | JJN    | ETF             |
| Jack Henry & Associates Inc.                              | JKHY   | Equity          |
| Jinkosolar Holding Company Limited                        | JKS    | Equity          |
| Jones Lang LaSalle Incorporated                           | JLL    | Equity          |
| Jumia Technologies AG                                     | JMIA   | Equity          |
| Jounce Therapeutics, Inc.                                 | JNCE   | Equity          |
| JOHNSON & JOHNSON   | JNJ    | Equity          |
| SPDR BARCLAYS HIGH YIELD BOND                             | JNK    | ETF             |
| JUNIPER NETWORKS, INC.                                    | JNPR   | Equity          |
| DIREXION DAILY JR GLD MNRS BULL 3X ETF                    | JNUG   | ETF             |
| iPath Series B Bloomberg Coffee Subindex Total Return ETN | JO     | ETF             |
| JOANN, INC.   | JOAN   | Equity          |
| Joby Aviation, Inc.                                       | JOBY   | Equity          |
| ST. JOE CORPORATION                                       | JOE    | Equity          |
| JPMORGAN CHASE & COMPANY                                  | JPM    | Equity          |
| JASPER THERAPEUTICS INC                                   | JSPR   | Equity          |
| NORDSTROM INC.  | JWN    | Equity          |
| JACKSON FINANCIAL INCORPORATION                           | JXN    | Equity          |
| JOINT CORP  | JYNT   | Equity          |
| KELLOGG COMPANY   | K      | Equity          |
| Kala Pharmaceuticals Inc                                  | KALA   | Equity          |
| Kaiser Aluminum Corporation                               | KALU   | Equity          |
| KALVISTA PHARMACEUTICALS INC                              | KALV   | Equity          |
| KAR AUCTION SERVICES, INC.                                | KAR    | Equity          |
| KraneShares Boserá MSCI China A ETF                       | KBA    | ETF             |
| Kimball International, Inc.                               | KBAL   | Equity          |
| SPDR S&P BANK ETF   | KBE    | ETF             |
| KB HOME   | KBH    | Equity          |
| KUBIENT INC   | KBNT   | Equity          |
| KBR, Inc.   | KBR    | Equity          |
| PowerShares KBW Bank ETF                                  | KBWB   | ETF             |
| Kingsoft Cloud Holdings Limited                           | KC     | Equity          |
| KYNDRYL HOLDINGS INCORPORATION                            | KD     | Equity          |
| Chinook Therapeutics                                      | KDNY   | Equity          |
| Keurig Dr. Pepper Inc.                                    | KDP    | Equity          |
| Kelly Services Inc  | KELYA  | Equity          |
| KOREA ELECTRIC POWER CORP.                                | KEP    | Equity          |
| AKERNA CORP.  | KERN   | Equity          |
| KIRBY CORPORATION   | KEX    | Equity          |

| MIAX Options Securities as of 6/17/22     |        |                 |
|---|--------|-----------------|
| Company Name                              | Symbol | Instrument Type |
| KEYCORP                                   | KEY    | Equity          |
| Keysight Technologies Inc.                | KEYS   | Equity          |
| Kforce Inc                                | KFRC   | Equity          |
| KORN/FERRY INTERNATIONAL                  | KFY    | Equity          |
| KINROSS GOLD CORPORATION                  | KGC    | Equity          |
| The Kraft Heinz Company                   | KHC    | Equity          |
| ORTHOPEDIATRICS CORP                      | KIDS   | Equity          |
| SPDR S&P Insurance ETF                    | KIE    | ETF             |
| KIMCO REALTY CORP.                        | KIM    | Equity          |
| Nextdoor Holdings, Inc.                   | KIND   | Equity          |
| Kirkland's Inc.                           | KIRK   | Equity          |
| KKR & Co. LP                              | KKR    | Equity          |
| KLA-TENCOR CORPORATION                    | KLAC   | Equity          |
| KULICKE AND SOFFA IND INC                 | KLIC   | Equity          |
| KALEYRA INC                               | KLR    | Equity          |
| KALTURA, INC.                             | KLTR   | Equity          |
| KIMBERLY-CLARK CORPORATION                | KMB    | Equity          |
| KAMADA LTD                                | KMDA   | Equity          |
| KINDER MORGAN, INC.                       | KMI    | Equity          |
| KEMPHARM, INC.                            | KMPH   | Equity          |
| Kennametal Inc.                           | KMT    | Equity          |
| CARMAX INC.                               | KMX    | Equity          |
| KNOWLES CORPORATION                       | KN     | Equity          |
| KNOWBE4, INC.                             | KNBE   | Equity          |
| Kandi Technologies Corporation            | KNDI   | Equity          |
| KNOT Offshore Partners LP                 | KNOP   | Equity          |
| Kiniksa Pharmaceuticals, Ltd              | KNSA   | Equity          |
| Kinsale Capital Group Inc                 | KNSL   | Equity          |
| Knight-Swift Transportation Holdings Inc. | KNX    | Equity          |
| THE COCA-COLA COMPANY                     | KO     | Equity          |
| Kodiak Sciences Inc                       | KOD    | Equity          |
| Eastman Kodak Company                     | KODK   | Equity          |
| ProShares UltraShort Bloomberg Natrl Gas  | KOLD   | ETF             |
| Koppers Holdings, Inc.                    | KOP    | Equity          |
| Kopin Corporation                         | KOPN   | Equity          |
| Kosmos Energy Ltd                         | KOS    | Equity          |
| Katapult Holdings, Inc.                   | KPLT   | Equity          |
| KARYOPHARM THERAPEUTICS, INC.             | KPTI   | Equity          |
| THE KROGER COMPANY                        | KR     | Equity          |
| KraneShares Global Carbon Strategy ETF    | KRBN   | ETF             |
| KIROMIC BIOPHARMA, INC.                   | KRBP   | Equity          |
| Kilroy Realty Corp.                       | KRC    | Equity          |
| SPDR S&P REGIONAL BANKING ETF             | KRE    | ETF             |
| KKR REAL ESTATE FINANCE TRUST INC.        | KREF   | Equity          |
| Sundial Growers Inc                       | KRMD   | Equity          |

| MIAX Options Securities as of 6/17/22     |        |                 |
|---|--------|-----------------|
| Company Name                              | Symbol | Instrument Type |
| Kornit Digital Ltd.                       | KRNT   | Equity          |
| Kearny Financial Corp.                    | KRNY   | Equity          |
| Kronos Worldwide, Inc.                    | KRO    | Equity          |
| KRONOS BIO INC                            | KRON   | Equity          |
| KIMBELL ROYALTY PARTNERS LP               | KRP    | Equity          |
| Karuna Therapeutics, Inc                  | KRTX   | Equity          |
| KRYSTAL BIOTECH, INC.                     | KRYS   | Equity          |
| KOHL'S CORPORATION                        | KSS    | Equity          |
| KT Corp.                                  | KT     | Equity          |
| Kontoor Brands, Inc.                      | KTB    | Equity          |
| Key Tronic Corporation                    | KTCC   | Equity          |
| Kratos Defense & Security Solutions, Inc. | KTOS   | Equity          |
| KULR TECHNOLOGY GROUP INC                 | KULR   | Equity          |
| Kura Oncology, Inc                        | KURA   | Equity          |
| Kennedy-Wilson Holdings Inc.              | KW     | Equity          |
| KraneShares CSI China Internet ETF        | KWEB   | ETF             |
| KAIXIN AUTO HOLDINGS                      | KXIN   | Equity          |
| KYMERA THERAPEUTICS INC                   | KYMR   | Equity          |
| Kayne Anderson MLP Investment Company     | KYN    | Equity          |
| KAZIA THERAPEUTICS LTD                    | KZIA   | Equity          |
| KEZAR LIFE SCIENCES INC                   | KZR    | Equity          |
| LOEWS CORPORATION                         | L      | Equity          |
| Standard BioTools Inc                     | LAB    | Equity          |
| Direxion Daily S&P Biotech Bear 3X ETF    | LABD   | ETF             |
| Direxion Daily S&P Biotech Bull 3X ETF    | LABU   | ETF             |
| Lithium Americas Corp                     | LAC    | Equity          |
| Lithia Motors Inc                         | LAD    | Equity          |
| Ladder Capital Corp                       | LADR   | Equity          |
| Lakeland Industries, Inc.                 | LAKE   | Equity          |
| LAMAR ADVERTISING COMPANY                 | LAMR   | Equity          |
| Gladstone Land Corporation                | LAND   | Equity          |
| nLIGHT, Inc                               | LASR   | Equity          |
| Laureate Education, Inc.                  | LAUR   | Equity          |
| CS DISCO, INC                             | LAW    | Equity          |
| LAZARD LTD.                               | LAZ    | Equity          |
| Luminar Technologies Inc                  | LAZR   | Equity          |
| LAZYDAYS HOLDINGS, INC.                   | LAZY   | Equity          |
| Liberty Broadband Corporation             | LBRDK  | Equity          |
| Liberty Oilfield Services Inc             | LBRT   | Equity          |
| LIBERTY GLOBAL INC                        | LBTYA  | Equity          |
| LIBERTY GLOBAL PLC                        | LBTYK  | Equity          |
| LendingClub Corporation                   | LC     | Equity          |
| LANNETT COMPANY, INC.                     | LCI    | Equity          |
| Lucid Group, Inc. (LCID)                  | LCID   | Equity          |
| LCI Industries (LCII)                     | LCII   | Equity          |

| MIAX Options Securities as of 6/17/22    |        |                 |
|--|--------|-----------------|
| Company Name                             | Symbol | Instrument Type |
| Lineage Cell Therapeutics, Inc           | LCTX   | Equity          |
| LIFETIME BRANDS, INC                     | LCUT   | Equity          |
| LOANDEPOT, INC.                          | LDI    | Equity          |
| LUMOS NETWORKS CORPORATION               | LDOS   | Equity          |
| LANDS' END, INC.                         | LE     | Equity          |
| Lear Corporation                         | LEA    | Equity          |
| RIBBIT LEAP LIMITED                      | LEAP   | Equity          |
| Lincoln Electric Holdings, Inc.          | LECO   | Equity          |
| LEGGETT & PLATT, INC.                    | LEG    | Equity          |
| LEGEND BIOTECH CORP                      | LEGN   | Equity          |
| LENNAR CORPORATION                       | LEN    | Equity          |
| LESLIES INC                              | LESL   | Equity          |
| CENTRUS ENERGY CORP.                     | LEU    | Equity          |
| Lion Electric Company                    | LEV    | Equity          |
| Levi Strauss & Co.                       | LEVI   | Equity          |
| CHINA LIFE INSURANCE CO., LTD.           | LFC    | Equity          |
| Archaea Energy Inc.                      | LFG    | Equity          |
| Leafly Holdings, Inc.                    | LFLY   | Equity          |
| LifeMD, Inc.                             | LFMD   | Equity          |
| LIFESTANCE HEALTH GROUP, INC.            | LFST   | Equity          |
| LEFTERIS ACQUISITION CORP                | LFTR   | Equity          |
| Lifevantage Corporation                  | LFVN   | Equity          |
| Lions Gate Entertainment Corp.           | LGFA   | Equity          |
| Lions Gate Entertainment Corporation     | LGFB   | Equity          |
| LION GROUP HOLDING LTD.                  | LGHL   | Equity          |
| LGI Homes, Inc.                          | LGIH   | Equity          |
| LogicMark, Inc                           | LGMK   | Equity          |
| Ligand Pharmaceuticals Inc.              | LGND   | Equity          |
| Largo Inc.                               | LGO    | Equity          |
| LABORATORY CORP OF AMER HLDG             | LH     | Equity          |
| LHC Group, Inc.                          | LHCG   | Equity          |
| LUCIRA HEALTH, INC.                      | LHDX   | Equity          |
| L3Harris Technologies, Inc.              | LHX    | Equity          |
| Li Auto Inc.                             | LI     | Equity          |
| Li-Cycle Holdings Corporation            | LICY   | Equity          |
| AEye, Inc.                               | LIDR   | Equity          |
| ATYR PHARMA, INC.                        | LIFE   | Equity          |
| LENNOX INTERNATIONAL, INC.               | LII    | Equity          |
| LiLAC Group                              | LILA   | Equity          |
| Liberty LiLAC Group                      | LILAK  | Equity          |
| Lilium N.V.                              | LILM   | Equity          |
| Linde plc                                | LIN    | Equity          |
| Lincoln Educational Services Corporation | LINC   | Equity          |
| Lindblad Expeditions Holdings, Inc       | LIND   | Equity          |
| LIQTECH INTERNATIONAL, INC.              | LIQT   | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| Global X Lithium & Battery ETF         | LIT    | ETF             |
| Lumentum Holdings Inc.                 | LITE   | Equity          |
| LivaNova PLC                           | LIVN   | Equity          |
| La Jolla Pharmaceutical Company        | LJPC   | Equity          |
| LKQ Corporation                        | LKQ    | Equity          |
| Lumber Liquidators Holdings Inc        | LL     | Equity          |
| ELI LILLY AND COMPANY                  | LLY    | Equity          |
| LeMaitre Vascular Inc.                 | LMAT   | Equity          |
| LIMBACH HOLDINGS, INC.                 | LMB    | Equity          |
| LM FUNDING AMERICA INC                 | LMFA   | Equity          |
| Lemonade, Inc                          | LMND   | Equity          |
| LIMINAL BIOSCIENCES INC.               | LMNL   | Equity          |
| LOCKHEED MARTIN CORPORATION            | LMT    | Equity          |
| LINCOLN NATIONAL CORPORATION           | LNC    | Equity          |
| Landec Corporation                     | LNDC   | Equity          |
| CHENIERE ENERGY, INC.                  | LNG    | Equity          |
| Lindsay Corporation                    | LNN    | Equity          |
| Alliant Energy Corporation             | LNT    | Equity          |
| Lantheus Holdings, Inc                 | LNTH   | Equity          |
| Light & Wonder, Inc.                   | LNW    | Equity          |
| Live Oak Bancshares, Inc               | LOB    | Equity          |
| EL POLLO LOCO HOLDINGS, INC.           | LOCO   | Equity          |
| Comstock Mining, Inc.                  | LODE   | Equity          |
| Logitech International S.A.            | LOGI   | Equity          |
| Loma Negra Cia Industrial Argentina SA | LOMA   | Equity          |
| Loop Industries, Inc                   | LOOP   | Equity          |
| Grand Canyon Education, Inc.           | LOPE   | Equity          |
| CARLOTZ, INC.                          | LOTZ   | Equity          |
| SPARK NETWORKS SE                      | LOV    | Equity          |
| The Lovesac Company                    | LOVE   | Equity          |
| LOWE'S COMPANIES INC.                  | LOW    | Equity          |
| Lipocine Inc.                          | LPCN   | Equity          |
| Dorian LPG Ltd                         | LPG    | Equity          |
| Laredo Petroleum Holdings, Inc.        | LPI    | Equity          |
| LG Display Co., Ltd.                   | LPL    | Equity          |
| LPL Financial Holdings Inc.            | LPLA   | Equity          |
| OPEN LENDING CORPORATION               | LPRO   | Equity          |
| LivePerson, Inc.                       | LPSN   | Equity          |
| LEAP THERAPEUTICS, INC                 | LPTX   | Equity          |
| LOUISIANA-PACIFIC CORPORATION          | LPX    | Equity          |
| iShares iBoxx \$ Invst Grade Crp Bond  | LQD    | ETF             |
| Liquidia Corporation                   | LQDA   | Equity          |
| LIQUIDITY SERVICES, INC.               | LQDT   | Equity          |
| LAM RESEARCH CORPORATION               | LRCX   | Equity          |
| LARIMAR THERAPEUTICS, INC.             | LRMR   | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| K12, Inc.                              | LRN    | Equity          |
| Lesaka Technologies, Inc.              | LSAK   | Equity          |
| Lattice Semiconductor Corporation      | LSCC   | Equity          |
| Life Storage, Inc.                     | LSI    | Equity          |
| LIGHTSPEED POS, INC.                   | LSPD   | Equity          |
| LANDSTAR SYSTEM INC                    | LSTR   | Equity          |
| The Liberty SiriusXM Group             | LSXMA  | Equity          |
| LIBERTY MEDIA CORP- SIRIUSXM           | LSXMK  | Equity          |
| LTC Properties Inc.                    | LTC    | Equity          |
| Latch, Inc.                            | LTCH   | Equity          |
| Livent Corporation                     | LTHM   | Equity          |
| Liberty TripAdvisor Holdings, Inc.     | LTRPA  | Equity          |
| LANTRONIX, INC.                        | LTRX   | Equity          |
| LOTTERY.COM, INC.                      | LTRY   | Equity          |
| LUFAX HOLDING LTD                      | LU     | Equity          |
| LULULEMON ATHLETICA INC.               | LULU   | Equity          |
| CenturyLink, Inc.                      | LUMN   | Equity          |
| LUNA INNOVATIONS INC                   | LUNA   | Equity          |
| PULMONX CORP                           | LUNG   | Equity          |
| SOUTHWEST AIRLINES COMPANY             | LUV    | Equity          |
| LUX HEALTH TECH ACQUISITION CORP.      | LUXA   | Equity          |
| LiveOne, Inc.                          | LVO    | Equity          |
| LiveVox Holding, Inc.                  | LVOX   | Equity          |
| LAS VEGAS SANDS CORPORATION            | LVS    | Equity          |
| Lamb Weston Holdings, Inc.             | LW     | Equity          |
| LIGHTWAVE LOGIC, INC.                  | LWLG   | Equity          |
| LexinFintech Holdings Ltd.             | LX     | Equity          |
| Lexington Realty Trust                 | LXP    | Equity          |
| Lexicon Pharmaceuticals, Inc.          | LXRX   | Equity          |
| LSB Industries Inc.                    | LXU    | Equity          |
| LYONDELLBASELL INDUSTRIES NV           | LYB    | Equity          |
| LYELL IMMUNOPHARMA, INC.               | LYEL   | Equity          |
| Lyft, Inc.                             | LYFT   | Equity          |
| Lloyds Banking Group Plc ADR           | LYG    | Equity          |
| LOYALTY VENTURES INC                   | LYLT   | Equity          |
| Live Nation Entertainment Inc          | LYV    | Equity          |
| LEGALZOOM.COM, INC                     | LZ     | Equity          |
| LA-Z-BOY INC.                          | LZB    | Equity          |
| MACY'S, INC.                           | M      | Equity          |
| MASTERCARD INCORPORATED                | MA     | Equity          |
| Mid-America Apartment Communities Inc. | MAA    | Equity          |
| THE MACERICH COMPANY                   | MAC    | Equity          |
| Merrimack Pharmaceuticals Inc          | MACK   | Equity          |
| MAG Silver Corp.                       | MAG    | Equity          |
| Main Street Capital Corporation        | MAIN   | Equity          |



| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| MANPOWERGROUP INC.                    | MAN    | Equity          |
| MANHATTAN ASSOCIATES INC.             | MANH   | Equity          |
| Manchester United plc                 | MANU   | Equity          |
| WM Technology, Inc                    | MAPS   | Equity          |
| MARRIOTT INTERNATIONAL, INC.          | MAR    | Equity          |
| Marathon Patent Group, Inc.           | MARA   | Equity          |
| Remark Holdings, Inc.                 | MARK   | Equity          |
| MASCO CORP.                           | MAS    | Equity          |
| Masimo Corporation                    | MASI   | Equity          |
| 908 DEVICES INC                       | MASS   | Equity          |
| MATTEL, INC.                          | MAT    | Equity          |
| Matthews International Corporation    | MATW   | Equity          |
| Matson, Inc.                          | MATX   | Equity          |
| MAXEON SOLAR TECHNOLOGIES, LTD        | MAXN   | Equity          |
| Maxar Technologies Inc.               | MAXR   | Equity          |
| iShares Barclays MBS Bond Fund ETF    | MBB    | ETF             |
| MBIA INC.                             | MBI    | Equity          |
| Mustang Bio, Inc.                     | MBIO   | Equity          |
| Malibu Boats, Inc.                    | MBUU   | Equity          |
| Moelis & Company                      | MC     | Equity          |
| MCDONALD'S CORPORATION                | MCD    | Equity          |
| MasterCraft Boat Holdings, Inc        | MCFT   | Equity          |
| MEMBERSHIP COLLECTIVE GROUP, INC.     | MCG    | Equity          |
| iShares MSCI China ETF                | MCHI   | ETF             |
| MICROCHIP TECHNOLOGY INC              | MCHP   | Equity          |
| MCKESSON CORPORATION                  | MCK    | Equity          |
| MOODY'S CORPORATION                   | MCO    | Equity          |
| Seres Therapeutics, Inc.              | MCRB   | Equity          |
| MONRACH CASINO & RESORT, INC          | MCRI   | Equity          |
| Marcus Corporation                    | MCS    | Equity          |
| MISTER CAR WASH INC                   | MCW    | Equity          |
| Mercury General Corporation           | MCY    | Equity          |
| Mednax Inc                            | MD     | Equity          |
| MongoDB, Inc.                         | MDB    | Equity          |
| M.D.C. HOLDINGS INC.                  | MDC    | Equity          |
| Madrigal Pharmaceuticals, Inc.        | MDGL   | Equity          |
| MONDELEZ INTERNATIONAL, INC.          | MDLZ   | Equity          |
| Allscripts Healthcare Solutions, Inc. | MDRX   | Equity          |
| MEDTRONIC, INC.                       | MDT    | Equity          |
| MDU RESOURCES GROUP INC.              | MDU    | Equity          |
| MEDAVAIL HOLDINGS, INC.               | MDVL   | Equity          |
| MIMEDX GROUP, INC.                    | MDXG   | Equity          |
| SPDR S&P MIDCAP 400                   | MDY    | ETF             |
| 23andMe Holding Co.                   | ME     | Equity          |
| Medifast, Inc.                        | MED    | Equity          |

| MIAX Options Securities as of 6/17/22       |        |                 |
|---|--------|-----------------|
| Company Name                                | Symbol | Instrument Type |
| Medpace Holdings, Inc                       | MEDP   | Equity          |
| Montrose Environmental Group, Inc           | MEG    | Equity          |
| METHODE ELECTRONICS, INC.                   | MEI    | Equity          |
| MEI PHARMA, INC.                            | MEIP   | Equity          |
| Mercadolibre Inc                            | MELI   | Equity          |
| Methanex Corp.                              | MEOH   | Equity          |
| Mercer International Inc.                   | MERC   | Equity          |
| Mesa Air Group Inc                          | MESA   | Equity          |
| Mesoblast Limited                           | MESO   | Equity          |
| METLIFE, INC.                               | MET    | Equity          |
| Meta Platforms, Inc.                        | FB     | Equity          |
| Meta Platforms, Inc.                        | META   | Equity          |
| RAMACO RESOURCES, INC.                      | METC   | Equity          |
| Roundhill Ball Metaverse ETF                | METV   | ETF             |
| MFA Financial Inc                           | MFA    | Equity          |
| MANULIFE FINANCIAL CORPORATION              | MFC    | Equity          |
| Micro Focus International plc               | MFGP   | Equity          |
| MERCURITY FINTECH HOLDING, INC.             | MFH    | Equity          |
| Medallion Financial Corporation             | MFIN   | Equity          |
| Mistras Group Inc                           | MG     | Equity          |
| Magna International Inc.                    | MGA    | Equity          |
| MoneyGram International Inc                 | MGI    | Equity          |
| Magic Software Enterprises Ltd              | MGIC   | Equity          |
| Vanguard Mega Cap 300 Growth ETF            | MGK    | ETF             |
| MGM RESORTS INTERNATIONAL                   | MGM    | Equity          |
| Magnite, Inc.                               | MGNI   | Equity          |
| MacroGenics, Inc.                           | MGNX   | Equity          |
| MGP Ingredients Inc.                        | MGPI   | Equity          |
| MEIRAGTX HOLDINGS PLC                       | MGTX   | Equity          |
| Magnolia Oil & Gas Corporation              | MGY    | Equity          |
| MOHAWK INDUSTRIES, INC.                     | MHK    | Equity          |
| MAIDEN HOLDINGS LTDSHS                      | MHLD   | Equity          |
| M/I Homes Inc                               | MHO    | Equity          |
| Macquarie Infrastructure Company Trust      | MIC    | Equity          |
| The Middleby Corporation                    | MIDD   | Equity          |
| Direxionshares Daily Mid Cap Bull 3X Shares | MIDU   | ETF             |
| MetroMile, Inc.                             | MILE   | Equity          |
| AIRSPAN NETWORKS HOLDINGS INC.              | MIMO   | Equity          |
| Mitcham Industries, Inc.                    | MIND   | Equity          |
| Mirion Technologies, Inc.                   | MIR    | Equity          |
| MIRUM PHARMACEUTICALS, INC.                 | MIRM   | Equity          |
| MILESTONE PHARMACEUTICALS, INC.             | MIST   | Equity          |
| Mitek Systems, Inc.                         | MITK   | Equity          |
| AG Mortgage Investment Trust, Inc.          | MITT   | Equity          |
| MIX TELEMATICS LTD                          | MIXT   | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| ETFMG Alternative Harvest ETF         | MJ     | ETF             |
| MCCORMICK AND COMPANY, INC.           | MKC    | Equity          |
| Markforged Holding Corporation        | MKFG   | Equity          |
| Markel Corporation                    | MKL    | Equity          |
| MKS Instruments, Inc.                 | MKSI   | Equity          |
| MarketAxess Holdings Inc.             | MKTX   | Equity          |
| MoneyLion Inc.                        | ML     | Equity          |
| Melco Resorts & Entertainment Limited | MLCO   | Equity          |
| MillerKnoll, Inc.                     | MLKN   | Equity          |
| MARTIN MARIETTA MATERIALS INC         | MLM    | Equity          |
| MILESTONE SCIENTIFIC, INC             | MLSS   | Equity          |
| Meta Materials Inc.                   | MMAT   | Equity          |
| MARSH & MCLENNAN INC                  | MMC    | Equity          |
| MARTIN MIDSTREAM PARTNERS LP          | MMLP   | Equity          |
| 3M COMPANY                            | MMM    | Equity          |
| MAGELLAN MIDSTREAM PARTNERS L.P       | MMP    | Equity          |
| Merit Medical Systems, Inc.           | MMSI   | Equity          |
| MAVERIX METALS INC                    | MMX    | Equity          |
| MakeMyTrip Ltd                        | MMYT   | Equity          |
| Manning & Napier Inc.                 | MN     | Equity          |
| MONDAY.COM LTD                        | MNDY   | Equity          |
| MANNKIND CORPORATION                  | MNKD   | Equity          |
| MIND MEDICINE INC.                    | MNMD   | Equity          |
| PROG Holdings, Inc.                   | MNOV   | Equity          |
| BRIGHAM MINERALS INC.                 | MNRL   | Equity          |
| Monro, Inc.                           | MNRO   | Equity          |
| MINISO GROUP HOLDING LTD.             | MNSO   | Equity          |
| MONSTER BEVERAGE CORPORATION          | MNST   | Equity          |
| Momentum Inc.                         | MNTS   | Equity          |
| Momentive Global Inc                  | MNTV   | Equity          |
| Manitex International Inc             | MNTX   | Equity          |
| ALTRIA GROUP INC.                     | MO     | Equity          |
| Modine Manufacturing Company          | MOD    | Equity          |
| MODEL N, INC.                         | MODN   | Equity          |
| MOGO INC                              | MOGO   | Equity          |
| Molina Healthcare Inc.                | MOH    | Equity          |
| Momo Inc.                             | MOMO   | Equity          |
| Market Vectors Agribusiness ETF       | MOO    | ETF             |
| MORPHIC HOLDINGS INC                  | MORF   | Equity          |
| MORNINGSSTAR INC                      | MORN   | Equity          |
| THE MOSAIC COMPANY                    | MOS    | Equity          |
| Movado Group, Inc.                    | MOV    | Equity          |
| MOXIAN, INC.                          | MOXC   | Equity          |
| MP Materials Corporation              | MP     | Equity          |
| Motorcar Parts of America, Inc.       | MPAA   | Equity          |

| MIAX Options Securities as of 6/17/22    |        |                 |
|--|--------|-----------------|
| Company Name                             | Symbol | Instrument Type |
| MARATHON PETROLEUM CORPORATION           | MPC    | Equity          |
| MultiPlan Corporation                    | MPLN   | Equity          |
| MPLX LP                                  | MPLX   | Equity          |
| Medical Properties Trust Inc             | MPW    | Equity          |
| Monolithic Power Systems Inc             | MPWR   | Equity          |
| Marine Products Corporation              | MPX    | Equity          |
| MARQETA, INC                             | MQ     | Equity          |
| MARPAI, INC.                             | MRAI   | Equity          |
| EVERSPIN TECHNOLOGIES, INC.              | MRAM   | Equity          |
| MRC Global Inc.                          | MRC    | Equity          |
| Mercury Systems, Inc.                    | MRCY   | Equity          |
| MEREO BIOPHARMA GROUP PLC SPONSORED ADR  | MREO   | Equity          |
| MARIN SOFTWARE INCORPORATED              | MRIN   | Equity          |
| MERCK & COMPANY INC.                     | MRK    | Equity          |
| Marker Therapeutics, Inc.                | MRKR   | Equity          |
| Moderna, Inc.                            | MRNA   | Equity          |
| Marinus Pharmaceuticals, Inc.            | MRNS   | Equity          |
| MARATHON OIL CORPORATION                 | MRO    | Equity          |
| Mersana Therapeutics, Inc.               | MRSN   | Equity          |
| Marten Transport, Ltd.                   | MRTN   | Equity          |
| Mirati Therapeutics, Inc.                | MRTX   | Equity          |
| MERUS N.V.                               | MRUS   | Equity          |
| Maravai LifeSciences Holdings, Inc.      | MRVI   | Equity          |
| MARVELL TECHNOLOGY GROUP LTD.            | MRVL   | Equity          |
| MORGAN STANLEY                           | MS     | Equity          |
| Mesabi Trust                             | MSB    | Equity          |
| MSCI Inc                                 | MSCI   | Equity          |
| MICROSOFT CORPORATION                    | MSFT   | Equity          |
| Madison Square Garden Entertainment Corp | MSGE   | Equity          |
| Madison Square Garden Sports Corporation | MSGS   | Equity          |
| MOTOROLA INC (reverse split)             | MSI    | Equity          |
| MSC Industrial Direct Co. Inc.           | MSM    | Equity          |
| ADVISOR SHARES PURE US CANNABIS          | MSOS   | ETF             |
| DATTO HOLDING CORP.                      | MSP    | Equity          |
| MICROSTRATEGY, INC                       | MSTR   | Equity          |
| ARCELORMITTAL                            | MT     | Equity          |
| METALLA ROYALTY & STREAMING LTD.         | MTA    | Equity          |
| M & T BANK CORP                          | MTB    | Equity          |
| Match Group, Inc.                        | MTCH   | Equity          |
| Matador Resources Company                | MTDR   | Equity          |
| MOLECULAR TEMPLATES, INC.                | MTEM   | Equity          |
| MGIC INVESTMENT CORPORATION              | MTG    | Equity          |
| MERITAGE HOMES CORPORATION               | MTH    | Equity          |
| MATERIALISE NV                           | MTLS   | Equity          |
| Vail Resorts, Inc.                       | MTN    | Equity          |

| MIAX Options Securities as of 6/17/22                 |        |                 |
|---|--------|-----------------|
| Company Name  | Symbol | Instrument Type |
| Meritor, Inc.   | MTOR   | Equity          |
| Matrix Service Company                                | MTRX   | Equity          |
| MACOM Technology Solutions Holdings, Inc.             | MTSI   | Equity          |
| Matterport, Inc.                                      | MTTR   | Equity          |
| Altria Group, Inc                                     | MTUM   | ETF             |
| THE MANITOWOC COMPANY, INC.                           | MTW    | Equity          |
| MASTEC INC  | MTZ    | Equity          |
| MICRON TECHNOLOGY INC.                                | MU     | Equity          |
| iShares S&P National AMT Free Municipal Bond Fund     | MUB    | ETF             |
| MUDRICK CAPITAL ACQUISITION CORPORATION II            | MUDS   | Equity          |
| Mitsubishi UFJ Financial Group, Inc.                  | MUFG   | Equity          |
| MULLEN AUTOMOTIVE, INC.                               | MULN   | Equity          |
| MURPHY OIL CORPORATION                                | MUR    | Equity          |
| Murphy USA Inc.                                       | MUSA   | Equity          |
| McEwen Mining Inc.                                    | MUX    | Equity          |
| Microvision, Inc.                                     | MVIS   | Equity          |
| MV Oil Trust  | MVO    | Equity          |
| Microvast Holdings, Inc. (MVST)                       | MVST   | Equity          |
| Mueller Water Products, Inc.                          | MWA    | Equity          |
| MagnaChip Semiconductor Corp.                         | MX     | Equity          |
| Maxlinear, Inc.                                       | MXL    | Equity          |
| MYRIAD GENETICS INC                                   | MYGN   | Equity          |
| MYMD PHARMACEUTICALS, INC.                            | MYMD   | Equity          |
| Myovant Sciences Ltd                                  | MYOV   | Equity          |
| PLAYSTUDIOS, Inc.                                     | MYPS   | Equity          |
| MYT NETHERLANDS PARENT BV                             | MYTE   | Equity          |
| N-ABLE, INC   | NABL   | Equity          |
| Direxion Daily Homebuilders & Supplies Bull 3X Shares | NAIL   | ETF             |
| DUCKHORN PORTFOLIO, INC.                              | NAPA   | Equity          |
| Inari Medical, Inc                                    | NARI   | Equity          |
| Nordic American Tankers Ltd                           | NAT    | Equity          |
| National Instruments Corporation                      | NATI   | Equity          |
| Nautilus Biotechnology, Inc.                          | NAUT   | Equity          |
| Navidea Biopharmaceuticals Inc.                       | NAVB   | Equity          |
| NAVIENT CORPORATION                                   | NAVI   | Equity          |
| New Age Beverages Corporation                         | NBEV   | Equity          |
| NEUROCRINE BIOSCIENCES                                | NBIX   | Equity          |
| NABORS INDUSTRIES LTD.                                | NBR    | Equity          |
| Nabriva Therapeutics plc                              | NBRV   | Equity          |
| NEUBASE THERAPEUTICS INC                              | NBSE   | Equity          |
| NORWEGIAN CRUISE LINE HOLDINGS LTD.                   | NCLH   | Equity          |
| National Cinenedia Inc                                | NCMI   | Equity          |
| nCino, Inc  | NCNO   | Equity          |
| NCR CORP  | NCR    | Equity          |
| The9 Limited-ADR                                      | NCTY   | Equity          |

| MIAX Options Securities as of 6/17/22                  |        |                 |
|--|--------|-----------------|
| Company Name   | Symbol | Instrument Type |
| Nasdaq OMX Group                                       | NDAQ   | Equity          |
| NOODLES & COMPANY                                      | NDLS   | Equity          |
| Nordson Corporation                                    | NDSN   | Equity          |
| NextEra Energy, Inc.                                   | NEE    | Equity          |
| NEWMONT MINING CORPORATION                             | NEM    | Equity          |
| NeoGenomics, Inc.                                      | NEO    | Equity          |
| NEONODE INC.   | NEON   | Equity          |
| NextEra Energy Partners, LP                            | NEP    | Equity          |
| Roundhill BITKRAFT Esports & Digital Entertainment ETF | NERD   | ETF             |
| Minerva Neurosciences, Inc.                            | NERV   | Equity          |
| Cloudflare, Inc.                                       | NET    | Equity          |
| ENETI INC.   | NETI   | Equity          |
| NEW PACIFIC METALS CORP                                | NEWP   | Equity          |
| New Relic, Inc.  | NEWR   | Equity          |
| Newtek Business Services Corp                          | NEWT   | Equity          |
| NexTier Oilfield Solutions Inc.                        | NEX    | Equity          |
| NEXA RESOURCES S.A.                                    | NEXA   | Equity          |
| NEXTDECADE CORP.                                       | NEXT   | Equity          |
| New Fortress Energy Inc                                | NFE    | Equity          |
| National Fuel Gas Company                              | NFG    | Equity          |
| NETFLIX, INC.  | NFLX   | Equity          |
| DEFIANCE DIGITAL REVOLUTION ETF                        | NFTZ   | ETF             |
| NOVAGOLD RESOURCES INC (dist)                          | NG     | Equity          |
| NEW GOLD, INC.   | NGD    | Equity          |
| National Grid PLC                                      | NGG    | Equity          |
| NGL ENERGY PARTNERS L.P.                               | NGL    | Equity          |
| NGM BIOPHARMACEUTICALS, INC.                           | NGM    | Equity          |
| Natural Grocers by Vitamin Cottage, Inc.               | NGVC   | Equity          |
| NantHealth, Inc  | NH     | Equity          |
| National HealthCare Corporation                        | NHC    | Equity          |
| National Health Investors Inc.                         | NHI    | Equity          |
| NATURAL HEALTH TRENDS CORP.                            | NHTC   | Equity          |
| NightHawk Biosciences                                  | NHWK   | Equity          |
| NISOURCE, INC  | NI     | Equity          |
| NICE Ltd.  | NICE   | Equity          |
| BitNile Holdings, Inc.                                 | NILE   | Equity          |
| NINE ENERGY SERVICE INC                                | NINE   | Equity          |
| NIO Inc.   | NIO    | Equity          |
| Niu Technologies                                       | NIU    | Equity          |
| NIKE INC.  | NKE    | Equity          |
| Nikola Corporation                                     | NKLA   | Equity          |
| NEKTAR THERAPEUTICS                                    | NKTR   | Equity          |
| NKARTA INC   | NKTX   | Equity          |
| NortonLifeLock Inc                                     | NLOK   | Equity          |
| Nautilus Inc.  | NLS    | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| Neoleukin Therapeutics, Inc. (        | NLTX   | Equity          |
| ANNALY CAPITAL MANAGEMENT, INC.       | NLY    | Equity          |
| Navios Maritime Holdings, Inc.        | NM     | Equity          |
| New Mountain Finance Corporation      | NMFC   | Equity          |
| NMI Holdings, Inc.                    | NMIH   | Equity          |
| Navios Maritime Partners LP           | NMM    | Equity          |
| Nomura Holdings, Inc.                 | NMR    | Equity          |
| NEMAURA MEDICAL, INC.                 | NMRD   | Equity          |
| Newmark Group Inc                     | NMRK   | Equity          |
| NN, Inc.                              | NNBR   | Equity          |
| NANO DIMENSION LTD                    | NNDM   | Equity          |
| National Retail Properties, Inc.      | NNN    | Equity          |
| NANO-X IMAGING LTD                    | NNOX   | Equity          |
| NanoViricides, Inc                    | NNVC   | Equity          |
| Noah Holdings, Ltd.                   | NOAH   | Equity          |
| NORTHROP GRUMMAN CORP                 | NOC    | Equity          |
| Northern Oil and Gas Inc              | NOG    | Equity          |
| NOKIA CORPORATION                     | NOK    | Equity          |
| Nomad Foods Limited                   | NOMD   | Equity          |
| NOV, Inc.                             | NOV    | Equity          |
| Sunnova Energy International Inc      | NOVA   | Equity          |
| NOVAN, INC.                           | NOVN   | Equity          |
| ServiceNow Inc.                       | NOW    | Equity          |
| EnPro Industries Inc                  | NPO    | Equity          |
| Newpark Resources, Inc.               | NR     | Equity          |
| NEUROBO PHARMACEUTICALS INC           | NRBO   | Equity          |
| NERDWALLET, INC                       | NRDS   | Equity          |
| Nerdy Inc.                            | NRDY   | Equity          |
| NRG ENERGY, INC.                      | NRG    | Equity          |
| Energy Vault Holdings, Inc            | NRGV   | Equity          |
| NURIX THERAPEUTICS, INC.              | NRIX   | Equity          |
| Natural Resource Partners L.P.        | NRP    | Equity          |
| NRX PHARMACEUTICALS, INC              | NRXP   | Equity          |
| NEW RESIDENTIAL INVESTMENT CORP.      | NRZ    | Equity          |
| NuStar Energy LP                      | NS     | Equity          |
| National Storage Affiliates           | NSA    | Equity          |
| NORFOLK SOUTHERN CORPORATION          | NSC    | Equity          |
| Insperity, Inc.                       | NSP    | Equity          |
| INSPIREMD, INC.                       | NSPR   | Equity          |
| Napco Security Technologies, Inc.     | NSSC   | Equity          |
| NORTHERN STAR INVESTMENT CORP         | NSTB   | Equity          |
| NanoString Technologies, Inc.         | NSTG   | Equity          |
| NETAPP, INC.                          | NTAP   | Equity          |
| NetScout Systems, Inc.                | NTCT   | Equity          |
| NETEASE, INC.                         | NTES   | Equity          |

| MIAX Options Securities as of 6/17/22   |        |                 |
|---|--------|-----------------|
| Company Name                            | Symbol | Instrument Type |
| NETGEAR INC                             | NTGR   | Equity          |
| Intellia Therapeutics Inc.              | NTLA   | Equity          |
| Nutanix, Inc.                           | NTNX   | Equity          |
| Nam Tai Property Inc.                   | NTP    | Equity          |
| Nutrien Ltd.                            | NTR    | Equity          |
| Natera, Inc                             | NTRA   | Equity          |
| NORTHERN TRUST CORPORATIO               | NTRS   | Equity          |
| NetSol Technologies, Inc.               | NTWK   | Equity          |
| NUCOR CORPORATION                       | NUE    | Equity          |
| DIREXION DAILY GOLD MINERS BULL 3X SHRS | NUGT   | ETF             |
| NU SKIN ENTERPRISES INC.                | NUS    | Equity          |
| NuVasive, Inc.                          | NUVA   | Equity          |
| NOVAVAX, INC                            | NVAX   | Equity          |
| NovoCure Limited                        | NVCR   | Equity          |
| NVIDIA CORPORATION                      | NVDA   | Equity          |
| NV5 Global Inc.                         | NVEE   | Equity          |
| NUVEI CORPORATION                       | NVEI   | Equity          |
| NAVIGATOR HOLDINGS LTD.                 | NVGS   | Equity          |
| Nova Measuring Instruments Ltd.         | NVMI   | Equity          |
| enVveno Medical Corporation             | NVNO   | Equity          |
| Novo Nordisk                            | NVO    | Equity          |
| Nevro Corp.                             | NVRO   | Equity          |
| ALCON INC (Merger)                      | NVS    | Equity          |
| Envista Holdings Corp                   | NVST   | Equity          |
| nVent Electric plc                      | NVT    | Equity          |
| Invitae Corporation                     | NVTA   | Equity          |
| NAVITAS SEMICONDUCTOR CORPORATION       | NVTS   | Equity          |
| NUVVE HOLDING CORP.                     | NVVE   | Equity          |
| Northwest Bancshares Inc                | NWBI   | Equity          |
| NatWest Group plc                       | NWG    | Equity          |
| NEWELL RUBBERMAID, INC.                 | NWL    | Equity          |
| Northwest Pipe Company                  | NWPX   | Equity          |
| News Corporation                        | NWS    | Equity          |
| NEWS CORPORATION                        | NWSA   | Equity          |
| Quanex Building Products Corporation    | NX     | Equity          |
| NEXGEN ENERGY LTNEXGEN ENERGY LTD.D.    | NXE    | Equity          |
| NextGen Healthcare, Inc.                | NXGN   | Equity          |
| NXP Semiconductors NV                   | NXPI   | Equity          |
| NEXSTAR BROADCASTING GROUP, INC.        | NXST   | Equity          |
| NextCure, Inc                           | NXTC   | Equity          |
| NEW YORK CITY REIT, INC.                | NYC    | Equity          |
| NEW YORK COMM. BANCORP                  | NYCB   | Equity          |
| New York Mortgage Trust, Inc.           | NYMT   | Equity          |
| Nymox Pharmaceutical Corporation        | NYMX   | Equity          |
| NEW YORK TIMES COMPANY                  | NYT    | Equity          |



| MIAX Options Securities as of 6/17/22          |        |                 |
|--|--------|-----------------|
| Company Name                                   | Symbol | Instrument Type |
| Realty Income Corporation                      | O      | Equity          |
| Oasis Petroleum Inc                            | OAS    | Equity          |
| OBLONG, INC.                                   | OBLG   | Equity          |
| OBSEVA SA                                      | OBSV   | Equity          |
| OWENS CORNING INC.                             | OC     | Equity          |
| ONECONNECT FINANCIAL TECHNOLOGY CO LTD         | OCFT   | Equity          |
| ORIENTAL CULTURE HOLDING LTD                   | OCG    | Equity          |
| OCUGEN INC                                     | OCGN   | Equity          |
| OCWEN FINANCIAL CORPORATION                    | OCN    | Equity          |
| Oaktree Specialty Lending Corporation          | OCSL   | Equity          |
| Ocular Therapeutix, Inc.                       | OCUL   | Equity          |
| OCUPHIRE PHARMA, INC.                          | OCUP   | Equity          |
| ONCOCYTE CORP                                  | OCX    | Equity          |
| Old Dominion Freight Line (150 shares)         | ODFL   | Equity          |
| The ODP Corporation                            | ODP    | Equity          |
| Orion Engineered Carbons S.A.                  | OEC    | Equity          |
| ISHARES S&P 100 ETF                            | OEF    | ETF             |
| Orbital Energy Group, Inc.                     | OEG    | Equity          |
| Orion Energy Systems, Inc                      | OESX   | Equity          |
| Corporate Office Properties Trust              | OFC    | Equity          |
| OFG BANNCORP                                   | OFG    | Equity          |
| ORTHOFIX INTERNATIONAL N.V.                    | OFIX   | Equity          |
| OGE ENERGY CORP.                               | OGE    | Equity          |
| OrganiGram Holdings Inc                        | OGI    | Equity          |
| OSHARES GLOBAL INTERNET GIANTS ETF             | OGIG   | ETF             |
| ORGANON & CO.                                  | OGN    | Equity          |
| OMEGA Healthcare Investors, Inc.               | OHI    | Equity          |
| OWENS-ILLINOIS INC.                            | OI     | Equity          |
| MARKET VECTORS OIL SERVICES ETF                | OIH    | ETF             |
| OCEANEERING INTERNATIONAL, INC                 | OII    | Equity          |
| IPATH PURE BETA CRUDE OIL ETN                  | OIL    | ETF             |
| Oil States International, Inc.                 | OIS    | Equity          |
| ONEOK, INC.                                    | OKE    | Equity          |
| Okta, Inc.                                     | OKTA   | Equity          |
| CAMBRIDGE DISPLAY TECHNOLOGY INC.              | OLED   | Equity          |
| OLINK HOLDING                                  | OLK    | Equity          |
| Ollie's Bargain Outlet Holdings, Inc.          | OLLI   | Equity          |
| Aurora Innovation, Inc.                        | OLMA   | Equity          |
| OLIN CORP.                                     | OLN    | Equity          |
| OLO, INC.                                      | OLO    | Equity          |
| OLAPLEX HOLDINGS INC                           | OLPX   | Equity          |
| OUTSET MEDICAL, INC.                           | OM     | Equity          |
| GRUPO AEROPORTUARIO DEL CENTRO NORTE SAB DE CV | OMAB   | Equity          |
| OMNICOM GROUP                                  | OMC    | Equity          |
| OMNICELL, INC                                  | OMCL   | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| Omeros Corporation                     | OMER   | Equity          |
| Odyssey Marine Exploration Inc.        | OMEX   | Equity          |
| OneMain Holdings, Inc.                 | OMF    | Equity          |
| OWENS & MINOR, INC                     | OMI    | Equity          |
| ON Semiconductor Corporation           | ON     | Equity          |
| Old National Bancorp                   | ONB    | Equity          |
| ONCORUS, INC.                          | ONCR   | Equity          |
| ONCOSEC MEDICAL INCORPORATED           | ONCS   | Equity          |
| ONCTERNAL THERAPEUTICS, INC.           | ONCT   | Equity          |
| ONDAS HOLDINGS, INC.                   | ONDS   | Equity          |
| 1Life Healthcare, Inc.                 | ONEM   | Equity          |
| ORION OFFICE REIT INC                  | ONL    | Equity          |
| ON HOLDING AG                          | ONON   | Equity          |
| ON24, INC                              | ONTF   | Equity          |
| Onto Innovation Inc.                   | ONTO   | Equity          |
| ONCONOVA THERAPEUTICS INC.             | ONTX   | Equity          |
| Ooma, Inc                              | OOMA   | Equity          |
| Offerpad Solutions Inc.                | OPAD   | Equity          |
| Option Care Health, Inc                | OPCH   | Equity          |
| Opendoor Technologies Inc.             | OPEN   | Equity          |
| OppFi Inc.                             | OPFI   | Equity          |
| (New) Office Properties Income Trust   | OPI    | Equity          |
| OPKO HEALTH, INC.                      | OPK    | Equity          |
| Opera Limited                          | OPRA   | Equity          |
| OptimizeRx Corporation                 | OPRX   | Equity          |
| OPTINOSE, INC                          | OPTN   | Equity          |
| OCEAN POWER TECHNOLOGIES, INC.         | OPTT   | Equity          |
| Oppenheimer Holdings Inc.              | OPY    | Equity          |
| Osisko Gold Royalties Ltd              | OR     | Equity          |
| Ormat Technologies, Inc.               | ORA    | Equity          |
| Orange SA                              | ORAN   | Equity          |
| Orchid Island Capital, Inc.            | ORC    | Equity          |
| OWL ROCK CAPITAL CORP                  | ORCC   | Equity          |
| ORACLE CORPORATION                     | ORCL   | Equity          |
| Origin Materials, Inc.                 | ORGN   | Equity          |
| ORGANOGENESIS HOLDINGS, INC.           | ORGO   | Equity          |
| ORGENESIS INC.                         | ORGS   | Equity          |
| Old Republic International Corporation | ORI    | Equity          |
| ORIC PHARMACEUTICALS INC               | ORIC   | Equity          |
| ORLA MINING LTD                        | ORLA   | Equity          |
| O'REILLY AUTOMOTIVE INC.               | ORLY   | Equity          |
| Oramed Pharmaceuticals Inc.            | ORMP   | Equity          |
| Orion Marine Group, Inc.               | ORN    | Equity          |
| Orchard Therapeutics plc               | ORTX   | Equity          |
| OSCAR HEALTH INC.                      | OSCR   | Equity          |

| MIAX Options Securities as of 6/17/22        |        |                 |
|--|--------|-----------------|
| Company Name                                 | Symbol | Instrument Type |
| Overseas Shipholding Group, Inc.             | OSG    | Equity          |
| OAK STREET HEALTH INC                        | OSH    | Equity          |
| OSI Systems Inc.                             | OSIS   | Equity          |
| Oshkosh Corporation                          | OSK    | Equity          |
| OneSpan Inc.                                 | OSPN   | Equity          |
| ONE STOP SYSTEMS, INC.                       | OSS    | Equity          |
| Overstock.com, Inc.                          | OSTK   | Equity          |
| ORASURE TECHNOLOGIES INC                     | OSUR   | Equity          |
| OneSpaWorld Holdings Limited                 | OSW    | Equity          |
| OPEN TEXT CORPORATION                        | OTEX   | Equity          |
| Otonomy, Inc.                                | OTIC   | Equity          |
| Otis Worldwide Corporation                   | OTIS   | Equity          |
| OATLY GROUP AB                               | OTLY   | Equity          |
| Otonomo Technologies Ltd.                    | OTMO   | Equity          |
| Ontrak, Inc.                                 | OTRK   | Equity          |
| Ouster, Inc                                  | OUST   | Equity          |
| OUTFRONT MEDIA INC.                          | OUT    | Equity          |
| Ovid Therapeutics Inc.                       | OVID   | Equity          |
| Ovintiv Inc.                                 | OVV    | Equity          |
| Blue Owl Capital Inc.                        | OWL    | Equity          |
| Owlet, Inc.                                  | OWLT   | Equity          |
| Oxford Industries, Inc                       | OXM    | Equity          |
| Oxford Square Capital Corporation            | OXSQ   | Equity          |
| OCCIDENTAL PETROLEUM CORPORATION             | OXY    | Equity          |
| OYSTER POINT PHARMA INC                      | OYST   | Equity          |
| Bank OZK                                     | OZK    | Equity          |
| PLAINS ALL AMERICAN PIPELINE, LP             | PAA    | Equity          |
| PAN AMERICAN SILVER CORPORATION              | PAAS   | Equity          |
| Pacific Biosciences of California Inc        | PACB   | Equity          |
| RANPAK HOLDINGS CORP                         | PACK   | Equity          |
| PacWest Bancorp                              | PACW   | Equity          |
| Penske Automotive Group Inc                  | PAG    | Equity          |
| PLAINS GP HOLDINGS, L.P.                     | PAGP   | Equity          |
| PagSeguro Digital Ltd.                       | PAGS   | Equity          |
| Pampa Energía S.A.                           | PAM    | Equity          |
| PANGAEA LOGISTICS SOLUTIONS LTD.             | PANL   | Equity          |
| Palo Alto Networks Inc                       | PANW   | Equity          |
| PAR Technology Corporation                   | PAR    | Equity          |
| Paramount Global Class B                     | PARA   | Equity          |
| Paramount Global Class A                     | PARAA  | Equity          |
| Par Pacific Holdings, Inc.                   | PARR   | Equity          |
| Passage Bio, Inc.                            | PASG   | Equity          |
| UIPATH INC                                   | PATH   | Equity          |
| Global X U.S. Infrastructure Development ETF | PAVE   | ETF             |
| PAVMED INC                                   | PAVM   | Equity          |

| MIAX Options Securities as of 6/17/22            |        |                 |
|--|--------|-----------------|
| Company Name                                     | Symbol | Instrument Type |
| PATRIA INVESTMENT LTD                            | PAX    | Equity          |
| PAYMENTUS HOLDINGS, INC                          | PAY    | Equity          |
| PAYA HOLDINGS INC                                | PAYA   | Equity          |
| Paycom Software, Inc.                            | PAYC   | Equity          |
| Payoneer Global Inc.                             | PAYO   | Equity          |
| PaySign, Inc.                                    | PAYS   | Equity          |
| PAYCHEX, INC                                     | PAYX   | Equity          |
| Pembina Pipeline Corporation                     | PBA    | Equity          |
| PBF ENERGYINC.                                   | PBF    | Equity          |
| PBF Logistics LP                                 | PBFX   | Equity          |
| PITNEY BOWES INC.                                | PBI    | Equity          |
| POTBELLY CORPORATION                             | PBPB   | Equity          |
| PETROLEO BRASILEIRO PETROBRAS SA                 | PBR    | Equity          |
| PERMIAN BASIN ROYALTY TRUST                      | PBT    | Equity          |
| POWERSHARES WILDERHILL CLEAN ENERGY              | PBW    | ETF             |
| PUMA BIOTECHNOLOGY, INC.                         | PBYI   | Equity          |
| PACCAR INC.                                      | PCAR   | Equity          |
| PG & E CORP                                      | PCG    | Equity          |
| PotlatchDeltic Corporation                       | PCH    | Equity          |
| PROCORE TECH.                                    | PCOR   | Equity          |
| Pacira Pharmaceuticals, Inc./DE                  | PCRX   | Equity          |
| PURECYCLE TECHNOLOGIES INC                       | PCT    | Equity          |
| Paylocity Holding Corporation                    | PCTY   | Equity          |
| Park City Group Inc.                             | PCYG   | Equity          |
| PagerDuty, Inc.                                  | PD     | Equity          |
| INVESCO OPTIMUM YIELD DIVER STRATEGY NO K-1 ETF  | PDBC   | ETF             |
| PDC Energy Inc.                                  | PDCE   | Equity          |
| Patterson Companies, Inc.                        | PDCO   | Equity          |
| Pinduoduo Inc.                                   | PDD    | Equity          |
| PDF Solutions Inc                                | PDFS   | Equity          |
| Piedmont Office Realty Trust Inc.                | PDM    | Equity          |
| Precision Drilling Corporation                   | PDS    | Equity          |
| PDS BIOTECHNOLOGY CORP.                          | PDSB   | Equity          |
| Healthpeak Properties, Inc.                      | PEAK   | Equity          |
| PHILLIPS EDISON & COMPANY, INC.                  | PECO   | Equity          |
| PUBLIC SERVICE ENT GROUP INC                     | PEG    | Equity          |
| Pegasystems, Inc.                                | PEGA   | Equity          |
| INVESCO DYNAMIC LEISURE & ENTERTAINMENT ETF      | PEJ    | ETF             |
| Penumbra, Inc                                    | PEN    | Equity          |
| PENN NATIONAL GAMING INC                         | PENN   | Equity          |
| PEPSICO, INC.                                    | PEP    | Equity          |
| Perion Network Ltd.                              | PERI   | Equity          |
| PetIQ, Inc                                       | PETQ   | Equity          |
| PETMED EXPRESS, INC.                             | PETS   | Equity          |
| Invesco High Yield Equity Dividend Achievers ETF | PEY    | ETF             |

| MIAX Options Securities as of 6/17/22             |        |                 |
|---|--------|-----------------|
| Company Name                                      | Symbol | Instrument Type |
| PFIZER INC.                                       | PFE    | Equity          |
| iShares US Preferred Stock                        | PFF    | ETF             |
| PRINCIPAL FINANCIAL GROUP, INC.                   | PFG    | Equity          |
| Performance Food Group Company                    | PFGC   | Equity          |
| Performant Financial Corporation                  | PFMT   | Equity          |
| PROVIDENT FINANCIAL SERVICES, INC                 | PFS    | Equity          |
| PennyMac Financial Services, Inc.                 | PFSI   | Equity          |
| PFSweb Inc.                                       | PFSW   | Equity          |
| PROCTER & GAMBLE COMPANY                          | PG     | Equity          |
| Precigen, Inc.                                    | PGEN   | Equity          |
| PowerShares Financial Preferred ETF               | PGF    | ETF             |
| PowerShares Golden Dragon China Portfolio         | PGJ    | ETF             |
| Progyny Inc                                       | PGNY   | Equity          |
| PROGRESSIVE CORPORATION                           | PGR    | Equity          |
| Paramount Group Inc.                              | PGRE   | Equity          |
| PropertyGuru Group Limited                        | PGRU   | Equity          |
| PGT, Inc.   | PGTI   | Equity          |
| PARKER-HANNIFIN CORP                              | PH     | Equity          |
| PHASEBIO PHARMACEUTICALS, INC.                    | PHAS   | Equity          |
| PHATHOM PHARMACEUTICALS, INC.                     | PHAT   | Equity          |
| Koninklijke Philips N.V                           | PHG    | Equity          |
| PHIO PHARMACEUTICALS CORP.                        | PHIO   | Equity          |
| PULTEGROUP, INC.                                  | PHM    | Equity          |
| PHREESIA, INC.                                    | PHR    | Equity          |
| PHUNWARE, INC.                                    | PHUN   | Equity          |
| PANHANDLE OIL AND GAS, INC.                       | PHX    | Equity          |
| Impinj, Inc.                                      | PI     | Equity          |
| iShares MSCI Global Metals & Mining Producers ETF | PICK   | ETF             |
| POLARIS INDUSTRIES, INC.                          | PII    | Equity          |
| Premier Inc                                       | PINC   | Equity          |
| Ping Identity Holding Corp.                       | PING   | Equity          |
| Pinterest, Inc.                                   | PINS   | Equity          |
| PINE ISLAND ACQUISITION CORP                      | PIPP   | Equity          |
| Piper Sandler Companies                           | PIPR   | Equity          |
| Pieris Pharmaceuticals Inc.                       | PIRS   | Equity          |
| SHIFTPIXY, INC.                                   | PIXY   | Equity          |
| PJT Partners Inc.                                 | PJT    | Equity          |
| Park Hotels & Resorts Inc.                        | PK     | Equity          |
| PACKAGING CORP OF AMERICA                         | PKG    | Equity          |
| PERKINELMER, INC.                                 | PKI    | Equity          |
| POSCO   | PKX    | Equity          |
| Planet Labs PBC                                   | PL     | Equity          |
| Photronics Inc.                                   | PLAB   | Equity          |
| Anaplan, Inc.                                     | PLAN   | Equity          |
| Dave & Buster's Entertainment, Inc.               | PLAY   | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| PLBY GROUP, INC.                      | PLBY   | Equity          |
| CHILDREN'S PLACE RETAIL               | PLCE   | Equity          |
| PROLOGIS INC.                         | PLD    | Equity          |
| PLATINUM GROUP METALS LTD.            | PLG    | Equity          |
| PIEDMONT LITHIUM LTD                  | PLL    | Equity          |
| Palomar Holdings, Inc                 | PLMR   | Equity          |
| Planet Fitness, Inc.                  | PLNT   | Equity          |
| Douglas Dynamics, Inc.                | PLOW   | Equity          |
| Pulse Biosciences, Inc.               | PLSE   | Equity          |
| PLAYTIKA HOLDING CORP.                | PLTK   | Equity          |
| Palantir Technologies Inc.            | PLTR   | Equity          |
| PLUG POWER INC                        | PLUG   | Equity          |
| Protalix BioTherapeutics Inc.         | PLX    | Equity          |
| PLX PHARMA, INC.                      | PLXP   | Equity          |
| Playa Hotels & Resorts N.V.           | PLYA   | Equity          |
| PHILIP MORRIS INTERNATIONAL, INC.     | PM     | Equity          |
| PHARMACYTE BIOTECH, INC.              | PMCB   | Equity          |
| Pennymac Mortgage Investment Trust    | PMT    | Equity          |
| PMV PHARMACEUTICALS, INC.             | PMVP   | Equity          |
| PNC FINANCIAL SERVICES GROUP INC.     | PNC    | Equity          |
| Pinnacle Financial Partners, Inc.     | PNFP   | Equity          |
| PNM Resources, Inc                    | PNM    | Equity          |
| PennantPark Investment Corp           | PNNT   | Equity          |
| Pentair plc                           | PNR    | Equity          |
| The Pennant Group, Inc                | PNTG   | Equity          |
| Pinnacle West Capital Corporation     | PNW    | Equity          |
| Insulet Corporation                   | PODD   | Equity          |
| Plantronics, Inc.                     | POLY   | Equity          |
| Pool Corporation                      | POOL   | Equity          |
| PORTLAND GENERAL ELECTRIC COMPANY     | POR    | Equity          |
| POSHMARK INC                          | POSH   | Equity          |
| Post Holdings, Inc.                   | POST   | Equity          |
| GLOBAL X CANNABIS ETF                 | POTX   | ETF             |
| Power Integrations Inc                | POWI   | Equity          |
| AMMO INC                              | POWW   | Equity          |
| Purple Biotech Ltd.                   | PPBT   | Equity          |
| PILGRIMS PRIDE CORP                   | PPC    | Equity          |
| PPG INDUSTRIES INC.                   | PPG    | Equity          |
| Market Vectors Pharmaceutical ETF     | PPH    | ETF             |
| PPL CORPORATION                       | PPL    | Equity          |
| PRA GROUP, INC.                       | PRAA   | Equity          |
| PRAXIS PRECISION MEDICINES, INC.      | PRAX   | Equity          |
| PORCH GROUP, INC.                     | PRCH   | Equity          |
| Perdoceo Education Corporation        | PRDO   | Equity          |
| Perficient, Inc.                      | PRFT   | Equity          |

| MIAX Options Securities as of 6/17/22   |        |                 |
|---|--------|-----------------|
| Company Name                            | Symbol | Instrument Type |
| PROG Holdings, Inc.                     | PRG    | Equity          |
| PERRIGO COMPANY                         | PRGO   | Equity          |
| Progress Software Corporation           | PRGS   | Equity          |
| Primerica, Inc.                         | PRI    | Equity          |
| Primoris Services Corporation           | PRIM   | Equity          |
| Proto Labs Inc                          | PRLB   | Equity          |
| PRELUDE THERAPEUTICS, INC.              | PRLD   | Equity          |
| Primo Water Corp.                       | PRMW   | Equity          |
| Pros Holdings Inc                       | PRO    | Equity          |
| PROFOUND MEDICAL CORP                   | PROF   | Equity          |
| CC NEUBERGER PRINCIPAL HOLDINGS II      | PRPB   | Equity          |
| PROPHASE LABS, INC                      | PRPH   | Equity          |
| Purple Innovation, Inc.                 | PRPL   | Equity          |
| PRECIPIO INC                            | PRPO   | Equity          |
| Proqr Therapeutics N.V.                 | PRQR   | Equity          |
| Peraso, Inc.                            | PRSO   | Equity          |
| PROTHENA CORPORATION PLC                | PRTA   | Equity          |
| Paratek Pharmaceuticals, Inc.           | PRTK   | Equity          |
| CarParts.com, Inc                       | PRTS   | Equity          |
| Party City Holdco Inc.                  | PRTY   | Equity          |
| PRUDENTIAL FINANCIAL, INC.              | PRU    | Equity          |
| PRIVIA HEALTH GROUP INC                 | PRVA   | Equity          |
| Provention Bio Inc                      | PRVB   | Equity          |
| Public Storage                          | PSA    | Equity          |
| INVESCO S&P SMALLCAP ENERGY ETF         | PSCE   | ETF             |
| Prospect Captial Corporation            | PSEC   | Equity          |
| Paysafe Limited                         | PSFE   | Equity          |
| PriceSmart, Inc.                        | PSMT   | Equity          |
| Parsons Corporation                     | PSN    | Equity          |
| PERSONALIS, INC.                        | PSNL   | Equity          |
| Pearson plc                             | PSO    | Equity          |
| ProShares Short QQQ                     | PSQ    | ETF             |
| ProShares UltraShort 7-10 Year Treasury | PST    | ETF             |
| Pure Storage, Inc.                      | PSTG   | Equity          |
| PERSHING SQUARE TONTINE HOLDINGS LTD.   | PSTH   | Equity          |
| Pluristem Therapeutics Inc              | PSTI   | Equity          |
| POSEIDA THERAPEUTICS, INC.              | PSTX   | Equity          |
| PHILLIPS 66                             | PSX    | Equity          |
| PTC Inc.                                | PTC    | Equity          |
| PTC Therapeutics, Inc.                  | PTCT   | Equity          |
| PATTERSON-UTI ENERGY INC.               | PTEN   | Equity          |
| PROTAGONIST THERAPEUTICS, INC.          | PTGX   | Equity          |
| PORTILLOS INC                           | PTLO   | Equity          |
| Portman Ridge Finance Corporation       | PTMN   | Equity          |
| Peloton Interactive, Inc.               | PTON   | Equity          |

| MIAX Options Securities as of 6/17/22           |        |                 |
|---|--------|-----------------|
| Company Name                                    | Symbol | Instrument Type |
| PETROS PHARMACEUTICALS, INC.                    | PTPI   | Equity          |
| PETROCHINA CO. LTD.                             | PTR    | Equity          |
| Proterra Inc                                    | PTRA   | Equity          |
| PUBMATIC INC                                    | PUBM   | Equity          |
| ProPetro Holding Corp.                          | PUMP   | Equity          |
| PVH Corp.                                       | PVH    | Equity          |
| Permianville Royalty Trust                      | PVL    | Equity          |
| PowerFleet, Inc                                 | PWFL   | Equity          |
| Perella Weinberg Partners                       | PWP    | Equity          |
| QUANTA SERVICES, INC.                           | PWR    | Equity          |
| POWERSCHOOL HOLDINGS INC                        | PWSC   | Equity          |
| PIONEER NATURAL RESOURCES COMPANY               | PXD    | Equity          |
| Invesco Dynamic Oil & Gas Services ETF          | PXJ    | ETF             |
| PIXELWORKS, INC.                                | PXLW   | Equity          |
| PayPal Holdings, Inc.                           | PYPL   | Equity          |
| PYROGENESIS CANADA, INC.                        | PYR    | Equity          |
| Papa John's International, Inc.                 | PZZA   | Equity          |
| FIRST TRUST NASDAQ CLEAN EDGE GREEN             | QCLN   | Equity          |
| QUALCOMM INCORPORATED                           | QCOM   | Equity          |
| Qudian, Inc.                                    | QD     | Equity          |
| QUIDEL CORPORATION                              | QDEL   | Equity          |
| 360 DIGITECH, INC.                              | QFIN   | Equity          |
| QIAGEN N V                                      | QGEN   | Equity          |
| PROSHARES ULTRASHORT QQQ                        | QID    | ETF             |
| PROSHARES ULTRA QQQ                             | QLD    | ETF             |
| QUALIGEN THERAPEUTICS, INC.                     | QLGN   | Equity          |
| QUALYS, INC.                                    | QLYS   | Equity          |
| QUANTUM CORPORATION                             | QMCO   | Equity          |
| Quanergy Systems, Inc                           | QNGY   | Equity          |
| Quinstreet, Inc.                                | QNST   | Equity          |
| INVESCO QQQ Trust                               | QQQ    | ETF             |
| Direxion NASDAQ-100 Equal Weighted Index Shares | QQQE   | ETF             |
| INVESCO NASDAQ NEXT GEN 100 ETF                 | QQQJ   | Equity          |
| QUEST RESOURCE HOLDING CORPORATION              | QRHC   | Equity          |
| Qurate Retail, Inc.                             | QRTEA  | Equity          |
| Qorvo, Inc.                                     | QRVO   | Equity          |
| QuantumScape Corporation                        | QS     | Equity          |
| Quantum-Si Incorporated                         | QSI    | Equity          |
| Restaurant Brands International Inc.            | QSR    | Equity          |
| Quotient Limited                                | QTNT   | Equity          |
| QUANTERIX CORPORATION                           | QTRX   | Equity          |
| Qutoutiao Inc.                                  | QTT    | Equity          |
| Q2 Holdings, Inc.                               | QTWO   | Equity          |
| Quad/Graphics, Inc.                             | QUAD   | Equity          |
| iShares MSCI USA Quality Factor ETF             | QUAL   | ETF             |



| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| QUANTUM COMPUTING INC.                 | QUBT   | Equity          |
| QuickLogic Corporation                 | QUIK   | Equity          |
| QUMU CORPORATION                       | QUMU   | Equity          |
| Quotient Technology Inc.               | QUOT   | Equity          |
| uniQure N.V.                           | QURE   | Equity          |
| GLOBAL X NASDAQ 100 COVERED CALL ETF   | QYLD   | ETF             |
| RYDER SYSTEMS INC.                     | R      | Equity          |
| CLOOPEN GROUP HOLDING LTD.             | RAAS   | Equity          |
| Ferrari N.V.                           | RACE   | Equity          |
| RITE AID CORPORATION                   | RAD    | Equity          |
| Rada Electronic Industries Ltd         | RADA   | Equity          |
| RADIUS GLOBAL INFRASTRUCTURE INC       | RADI   | Equity          |
| Freight Car America Inc                | RAIL   | Equity          |
| LiveRamp Holdings, Inc.                | RAMP   | Equity          |
| RAPT THERAPEUTICS, INC.                | RAPT   | Equity          |
| Ultragenyx Pharmaceutical Inc.         | RARE   | Equity          |
| Ritchie Bros. Auctioneers Incorporated | RBA    | Equity          |
| REDBALL ACQUISITION CORP.              | RBAC   | Equity          |
| Ribbon Communications Inc              | RBBN   | Equity          |
| Roblox Corporation                     | RBLX   | Equity          |
| Vicarious Surgical Inc.                | RBOT   | Equity          |
| Ready Capital Corporation              | RC     | Equity          |
| RED CAT HOLDINGS, INC.                 | RCAT   | Equity          |
| Avita Therapeutics, Inc.               | RCEL   | Equity          |
| Rogers Communication, Inc.             | RCI    | Equity          |
| RENT-A_CENTER, INC.                    | RCII   | Equity          |
| Rocket Pharmaceuticals, Inc.           | RCKT   | Equity          |
| ROYAL CARIBBEAN CRUISES LTD.           | RCL    | Equity          |
| R1 RCM Inc                             | RCM    | Equity          |
| RCM Technologies, Inc.                 | RCMT   | Equity          |
| RECON TECHNOLOGY LTD.                  | RCON   | Equity          |
| Arcus Biosciences, Inc.                | RCUS   | Equity          |
| Redfin Corporation                     | RDFN   | Equity          |
| RedHill Biopharma Ltd                  | RDHL   | Equity          |
| Reading International Inc              | RDI    | Equity          |
| RADIAN GROUP INC.                      | RDN    | Equity          |
| RadNet, Inc.                           | RDNT   | Equity          |
| Radius Health, Inc.                    | RDUS   | Equity          |
| Redwire Corporation                    | RDW    | Equity          |
| RADWARE LTD.                           | RDWR   | Equity          |
| Dr. Reddy's Laboratories Limited       | RDY    | Equity          |
| EVEREST RE GROUP LTD                   | RE     | Equity          |
| RealReal Inc                           | REAL   | Equity          |
| REE Automotive Ltd.                    | REE    | Equity          |
| Research Frontiers Inc.                | REFR   | Equity          |

| MIAX Options Securities as of 6/17/22          |        |                 |
|--|--------|-----------------|
| Company Name                                   | Symbol | Instrument Type |
| REGENCY CENTERS CORP                           | REG    | Equity          |
| REGENERON PHARMACEUTICALS                      | REGN   | Equity          |
| Ring Energy, Inc.                              | REI    | Equity          |
| REKOR SYSTEMS, INC.                            | REKR   | Equity          |
| REMITLY GLOBAL, INC                            | RELY   | Equity          |
| ISHARES MORTGAGE REAL ESTATE ETF               | REM    | ETF             |
| Market Vectors Rare Earth/Strategic Metals ETF | REMX   | ETF             |
| Renren, Inc.                                   | RENN   | Equity          |
| RENT THE RUNWAY, INC.                          | RENT   | Equity          |
| REPLIMUNE GROUP, INC.                          | REPL   | Equity          |
| RPC INC  | RES    | Equity          |
| Reata Pharmaceuticals Inc                      | RETA   | Equity          |
| Direxion Daily Retail Bull 3X Shares           | RETL   | ETF             |
| Revlon, Inc.                                   | REV    | Equity          |
| REV Group, Inc.                                | REVG   | Equity          |
| Rexford Industrial Realty, Inc.                | REXR   | Equity          |
| REYNOLDS CONSUMER PRODUCTS                     | REYN   | Equity          |
| Resideo Technologies Inc                       | REZI   | Equity          |
| REGIONS FINANCIAL CORPORATION                  | RF     | Equity          |
| RF Industries, Ltd.                            | RFIL   | Equity          |
| RAFAEL HOLDINGS, INC.                          | RFL    | Equity          |
| Resolute Forest Products Inc.                  | RFP    | Equity          |
| Reinsurance Group of America Inc               | RGA    | Equity          |
| Repligen Corporation                           | RGEN   | Equity          |
| ROYAL GOLD, INC.                               | RGLD   | Equity          |
| REGULUS THERAPEUTICS INC.                      | RGLS   | Equity          |
| REGENXBIO Inc.                                 | RGNX   | Equity          |
| Resources Connection, Inc.                     | RGP    | Equity          |
| STURM, RUGER & COMPANY INC.                    | RGR    | Equity          |
| REGIS CORP.                                    | RGS    | Equity          |
| Rigetti Computing, Inc                         | RGTI   | Equity          |
| RESTORATION HARDWARE HOLDINGS, INC             | RH     | Equity          |
| ROBERT HALF INTERNATIONAL                      | RHI    | Equity          |
| Ryman Hospitality Properties, Inc.(Stk Div)    | RHP    | Equity          |
| RCI HOSPITALITY HOLDINGS, INC.                 | RICK   | Equity          |
| Lordstown Motors Corporation                   | RIDE   | Equity          |
| TRANSOCEAN LTD.                                | RIG    | Equity          |
| Rigel Pharmaceuticals, Inc.                    | RIGL   | Equity          |
| B Riley Financial Inc                          | RILY   | Equity          |
| RIO TINTO PLC                                  | RIO    | Equity          |
| Riot Blockchain, Inc.                          | RIOT   | Equity          |
| Rivian Automotive, Inc.                        | RIVN   | Equity          |
| RAYMOND JAMES FINANCIAL INC                    | RJF    | Equity          |
| ARCADIA BIOSCIENCES, INC.                      | RKDA   | Equity          |
| Rocket Lab USA, Inc.                           | RKLB   | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| Rockley Photonics Holdings Limited    | RKLY   | Equity          |
| Rocket Companies, Inc.                | RKT    | Equity          |
| RALPH LAUREN CORPORATION              | RL     | Equity          |
| RELAY THERAPEUTICS INC                | RLAY   | Equity          |
| Radiant Logistics, Inc.               | RLGT   | Equity          |
| RLJ Lodging Trust                     | RLJ    | Equity          |
| RELMADA THERAPEUTICS INC              | RLMD   | Equity          |
| RLX TECHNOLOGY INC                    | RLX    | Equity          |
| REGIONAL MANAGEMENT CORP.             | RM     | Equity          |
| RUMBLEON, INC.                        | RMBL   | Equity          |
| RAMBUS INC                            | RMBS   | Equity          |
| RESMED, INC.                          | RMD    | Equity          |
| RIMINI STREET, INC.                   | RMNI   | Equity          |
| Romeo Power, Inc                      | RMO    | Equity          |
| Rockwell Medical, Inc.                | RMTI   | Equity          |
| AVIDITY BIOSCIENCES INC               | RNA    | Equity          |
| RINGCENTRAL, INC.                     | RNG    | Equity          |
| RENALYTIX AI PLC ADR                  | RNLX   | Equity          |
| RENAISSANCERE HOLDINGS LTD.           | RNR    | Equity          |
| ReNew Energy Global plc               | RNW    | Equity          |
| RealNetworks, Inc.                    | RNWK   | Equity          |
| CONSTRUCTION PARTNERS, INC            | ROAD   | Equity          |
| Ranger Oil Corporation                | ROCC   | Equity          |
| ROGERS CORPORATION                    | ROG    | Equity          |
| Retail Opportunity Investments Corp.  | ROIC   | Equity          |
| ROCKWELL AUTOMATION                   | ROK    | Equity          |
| Roku, Inc.                            | ROKU   | Equity          |
| Rollins, Inc.                         | ROL    | Equity          |
| ProShares Ultra Technology            | ROM    | ETF             |
| ROOT, INC. DELAWARE                   | ROOT   | Equity          |
| Roper Technologies, Inc.              | ROP    | Equity          |
| ROSS STORES INC.                      | ROST   | Equity          |
| Rover Group, Inc.                     | ROVR   | Equity          |
| REPAY HOLDINGS CORP.                  | RPAY   | Equity          |
| Rapid7, Inc.                          | RPD    | Equity          |
| RPM INTERNATIONAL, INC                | RPM    | Equity          |
| ROYALTY PHARMA PLC                    | RPRX   | Equity          |
| RPT Realty                            | RPT    | Equity          |
| REPARE THERAPEUTICS INC.              | RPTX   | Equity          |
| RANGE RESOURCES CORPORATION           | RRC    | Equity          |
| Red Robin Gourmet Burgers, Inc.       | RRGB   | Equity          |
| Red Rock Resorts, Inc.                | RRR    | Equity          |
| Regal Rexnord Corporation             | RRX    | Equity          |
| RELIANCE STEEL & ALUMINUM CO.         | RS     | Equity          |
| REPUBLIC SERVICES                     | RSG    | Equity          |

| MIAX Options Securities as of 6/17/22          |        |                 |
|--|--------|-----------------|
| Company Name                                   | Symbol | Instrument Type |
| Rush Street Interactive, Inc.                  | RSI    | Equity          |
| RISKIFIED LTD.                                 | RSKD   | Equity          |
| Invesco S&P 500 Equal Weight ETF               | RSP    | ETF             |
| Market Vectors Retail ETF                      | RTH    | ETF             |
| The Necessity Retail REIT, Inc.                | RTL    | Equity          |
| RATTLER MIDSTREAM LP                           | RTLRL  | Equity          |
| Raytheon Technologies Corporation              | RTX    | Equity          |
| RUBIUS THERAPEUTICS, INC                       | RUBY   | Equity          |
| Sunrun Inc.                                    | RUN    | Equity          |
| Rush Enterprises Inc                           | RUSHA  | Equity          |
| Ruth's Hospitality Group Inc.                  | RUTH   | Equity          |
| Revolve Group, Inc.                            | RVLV   | Equity          |
| Revance Therapeutics, Inc.                     | RVNC   | Equity          |
| RETRACTABLE TECHNOLOGIES, INC.                 | RVP    | Equity          |
| REVIVA PHARMACEUTICALS HOLDINGS, INC.          | RVPH   | Equity          |
| Riverview Bancorp, Inc.                        | RVSB   | Equity          |
| RYB EDUCATION INC.                             | RWLK   | Equity          |
| ProShares Short Russell2000                    | RWM    | ETF             |
| SPDR Dow Jones REIT ETF                        | RWR    | ETF             |
| REDWOOD TRUST, INC.                            | RWT    | Equity          |
| PROMETHEUS BIOSCIENCES                         | RXDX   | Equity          |
| RACKSPACE TECHNOLOGY, INC.                     | RXT    | Equity          |
| ROYAL BANK OF CANADA                           | RY     | Equity          |
| Ryanair Holdings plc                           | RYAAY  | Equity          |
| RAYONIER ADVANCED MATERIALS INC.               | RYAM   | Equity          |
| RYAN SPECIALITY GROUP                          | RYAN   | Equity          |
| Ryerson Holding Corporation                    | RYI    | Equity          |
| GLOBAL X FDS RUSSELL 2000                      | RYLD   | Equity          |
| Rayonier Inc.                                  | RYN    | Equity          |
| Rhythm Pharmaceuticals, Inc                    | RYTM   | Equity          |
| SENTINELONE, INC                               | S      | Equity          |
| SEABRIDGE GOLD INC                             | SA     | Equity          |
| SABRE CORPORATION                              | SABR   | Equity          |
| Safehold Inc                                   | SAFE   | Equity          |
| SANDERSON FARMS IN                             | SAFM   | Equity          |
| Safety Insurance Group Inc.                    | SAFT   | Equity          |
| Sage Therapeutics, Inc.                        | SAGE   | Equity          |
| SONIC AUTOMOTIVE, INC.                         | SAH    | Equity          |
| Saia, Inc.                                     | SAIA   | Equity          |
| Science Applications International Corporation | SAIC   | Equity          |
| SailPoint Technologies Holdings, Inc.          | SAIL   | Equity          |
| Boston Beer Company, Inc.                      | SAM    | Equity          |
| BANCO SANTANDER, S.A.                          | SAN    | Equity          |
| SANA BIOTECHNOLOGY INC.                        | SANA   | Equity          |
| Sandstorm Gold Ltd.                            | SAND   | Equity          |

| MIAX Options Securities as of 6/17/22                 |        |                 |
|---|--------|-----------------|
| Company Name  | Symbol | Instrument Type |
| Sanmina Corporation                                   | SANM   | Equity          |
| S&W SEED COMPANY                                      | SANW   | Equity          |
| SAP AG  | SAP    | Equity          |
| TUTTLE CAPITAL SHORT INNOVATION ETF                   | SARK   | ETF             |
| Sigma Labs, Inc.                                      | SASI   | Equity          |
| SATELLOGIC INC  | SATL   | Equity          |
| EchoStar Corp   | SATS   | Equity          |
| Cassava Sciences Inc                                  | SAVA   | Equity          |
| SPIRIT AIRLINES, INC.                                 | SAVE   | Equity          |
| Safe Bulkers Inc.                                     | SB     | Equity          |
| SBA COMMUNICATION CORP                                | SBAC   | Equity          |
| SPLASH BEVERAGE GROUP, INC.                           | SBEV   | Equity          |
| SINCLAIR BROADCASTING GRP                             | SBGI   | Equity          |
| Sally Beauty Holdings Inc                             | SBH    | Equity          |
| Star Bulk Carriers Corporation                        | SBLK   | Equity          |
| Signature Bank  | SBNY   | Equity          |
| SILVERBOW RESOURCES INC                               | SBOW   | Equity          |
| Sabra Health Care REIT, Inc.                          | SBRA   | Equity          |
| Companhia de Saneamento Basico do Estado de Sao Paulo | SBS    | Equity          |
| Sibanye-Stillwater                                    | SBSW   | Equity          |
| SILVERBACK THERAPEUTICS, INC.                         | SBTX   | Equity          |
| STARBUCKS CORPORATION                                 | SBUX   | Equity          |
| SOUTHERN COPPER CORPORATION                           | SCCO   | Equity          |
| Schwab US Dividend Equity ETF                         | SCHD   | ETF             |
| Schwab U.S. Large-Cap Growth ETF                      | SCHG   | ETF             |
| Scholastic Corporation                                | SCHL   | Equity          |
| SCHNITZER STEEL INDUSTRIES, INC                       | SCHN   | Equity          |
| THE CHARLES SCHWAB CORPORATION                        | SCHW   | Equity          |
| SERVICE CORPORATION INTERNATIONAL                     | SCI    | Equity          |
| ProShare UltraShort DJ UBS Crude Oil                  | SCO    | ETF             |
| Comscore Inc  | SCOR   | Equity          |
| SCIPLAY CORP  | SCPL   | Equity          |
| STEELCASE, INC. CLASS A                               | SCS    | Equity          |
| SCANSOURCE, INC.                                      | SCSC   | Equity          |
| Societal CDMO, Inc.                                   | SCTL   | Equity          |
| Sculptor Capital Management, Inc                      | SCU    | Equity          |
| Shoe Carnival Inc                                     | SCVL   | Equity          |
| SecureWorks Corp.                                     | SCWX   | Equity          |
| SCYNEXIS, Inc.  | SCYX   | Equity          |
| iShares MSCI EAFE Small Cap Index Fund                | SCZ    | ETF             |
| SandRidge Energy, Inc.                                | SD     | Equity          |
| SmileDirectClub, Inc.                                 | SDC    | Equity          |
| SCHRODINGER, INC.                                     | SDGR   | Equity          |
| STRONGHOLD DIGITAL MINING, INC.                       | SDIG   | Equity          |
| Global X SuperDividend ETF                            | SDIV   | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| ProShares UltraPro Short Dow30        | SDOW   | ETF             |
| PROSHARES ULTRASHORT S&P500           | SDS    | ETF             |
| SPDR S&P Dividend ETF                 | SDY    | ETF             |
| Sea Limited                           | SE     | Equity          |
| SeaChange International, Inc.         | SEAC   | Equity          |
| SEAWORLD ENTERTAINMENT, INC.          | SEAS   | Equity          |
| VIVID SEATS INC                       | SEAT   | Equity          |
| SECOO HOLDING LTD.                    | SECO   | Equity          |
| SolarEdge Technologies, Inc.          | SEDG   | Equity          |
| SEALED AIR CORP                       | SEE    | Equity          |
| SEELOS THERAPEUTICS, INC              | SEEL   | Equity          |
| SEER, INC.                            | SEER   | Equity          |
| SEI INVESTMENTS CO                    | SEIC   | Equity          |
| SELECTA BIOSCIENCES, INC.             | SELB   | Equity          |
| Select Medical Holdings Corporation   | SEM    | Equity          |
| Senseonics Holdings Inc.              | SENS   | Equity          |
| SES AI Corporation                    | SES    | Equity          |
| Sesen Bio, Inc.                       | SESN   | Equity          |
| Stifel Financial Corp.                | SF     | Equity          |
| Safeguard Scientifics, Inc.           | SFE    | Equity          |
| Stitch Fix, Inc.                      | SFIX   | Equity          |
| SHIP FINANCE INTERNATIONAL LIMITED    | SFL    | Equity          |
| SPROUTS FARMERS MARKET, INC.          | SFM    | Equity          |
| Shift Technologies, Inc.              | SFT    | Equity          |
| SWEETGREEN, INC.                      | SG     | Equity          |
| SG BLOCKS, INC.                       | SGBX   | Equity          |
| Superior Group of Companies, Inc.     | SGC    | Equity          |
| Seattle Genetics, Inc.                | SGEN   | Equity          |
| SIGNIFY HEALTH INC                    | SGFY   | Equity          |
| SMART Global Holdings, Inc.           | SGH    | Equity          |
| Super Group                           | SGHC   | Equity          |
| Singularity Future Technology Ltd.    | SGLY   | Equity          |
| Sangamo Therapeutics, Inc.            | SGMO   | Equity          |
| ETFS Physical Swiss Gold Shares ETF   | SGOL   | ETF             |
| Surgery Partners Inc.                 | SGRY   | Equity          |
| SIGILON THERAPEUTICS, INC.            | SGTX   | Equity          |
| ProShares Short S&P 500               | SH     | ETF             |
| Shake Shack Inc.                      | SHAK   | Equity          |
| Sharecare, Inc.                       | SHCR   | Equity          |
| Shell plc                             | SHEL   | Equity          |
| SHENANDOAH TELECOMMUNICATIONS CO      | SHEN   | Equity          |
| SHOALS TECHNOLOGIES GROUP             | SHLS   | Equity          |
| SHELL MIDSTREAM PARTNERS, L.P.        | SHLX   | Equity          |
| Sunstone Hotel Investors, Inc.        | SHO    | Equity          |
| STEVEN MADDEN, LTD.                   | SHOO   | Equity          |

| MIAX Options Securities as of 6/17/22        |        |                 |
|--|--------|-----------------|
| Company Name                                 | Symbol | Instrument Type |
| Shopify Inc.                                 | SHOP   | Equity          |
| SHAPEWAYS HOLDINGS, INC.                     | SHPW   | Equity          |
| THE SHERWIN-WILLIAMS COMPANY                 | SHW    | Equity          |
| Ishares Barclays 1-3 Year Treasury Bond      | SHY    | ETF             |
| SILVERGATE CAPITAL CORP.                     | SI     | Equity          |
| SI-BONE, INC.                                | SIBN   | Equity          |
| COMPANHIA SIDERURGICAL NACIONAL ADR          | SID    | Equity          |
| Siebert Financial Corp                       | SIEB   | Equity          |
| Sientra, Inc.                                | SIEN   | Equity          |
| Sify Technologies Ltd.                       | SIFY   | Equity          |
| SIGNET JEWELERS LIMITEDSHS                   | SIG    | Equity          |
| SIGA Technologies Inc.                       | SIGA   | Equity          |
| Sprott Inc                                   | SII    | Equity          |
| Global X Silver Miners ETF                   | SIL    | ETF             |
| ETFMG Prime Junior Silver ETF                | SILJ   | ETF             |
| SILK ROAD MEDICAL, INC.                      | SILK   | Equity          |
| SilverCrest Metals Inc.                      | SILV   | Equity          |
| Silicon Motion Technology Corp.              | SIMO   | Equity          |
| Sio Gene Therapies Inc.                      | SIOX   | Equity          |
| SIRIUS XM RADIO INC.                         | SIRI   | Equity          |
| SITE Centers Corporation                     | SITC   | Equity          |
| SITIME CORP                                  | SITM   | Equity          |
| SVB Financial Group                          | SIVB   | Equity          |
| ETFS Physical Silver                         | SIVR   | ETF             |
| Six Flags Entertainment Corporation          | SIX    | Equity          |
| South Jersey Industries, Inc.                | SJI    | Equity          |
| J M SMUCKER COMPANY (THE)                    | SJM    | Equity          |
| SPDR Barclays Short Term High Yield Bond ETF | SJNK   | ETF             |
| Shaw Communications, Inc.                    | SJR    | Equity          |
| San Juan Basin Royalty Trust                 | SJT    | Equity          |
| ProShares UltraShort Financials              | SKF    | ETF             |
| Skillsoft Corporation                        | SKIL   | Equity          |
| The Beauty Health Company                    | SKIN   | Equity          |
| Skillz Inc.                                  | SKLZ   | Equity          |
| SK TELECOM CO. LTD                           | SKM    | Equity          |
| Tanger Factory Outlet Centers, Inc.          | SKT    | Equity          |
| SKETCHERS USA INCORPORATED                   | SKX    | Equity          |
| Skyline Champion Corporation                 | SKY    | Equity          |
| SKYWATER TECHNOLOGY INC                      | SKYT   | Equity          |
| SkyWest Inc.                                 | SKYW   | Equity          |
| First Trust ISE Cloud Computing Index Fund   | SKYY   | ETF             |
| SILICON LABORATORIES INC.                    | SLAB   | Equity          |
| SCHLUMBERGER LIMITED                         | SLB    | Equity          |
| US Silica Holdings Inc.                      | SLCA   | Equity          |
| Solid Biosciences Inc                        | SLDB   | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| Solid Power, Inc.                     | SLDP   | Equity          |
| SUN LIFE FINANCIAL INC.               | SLF    | Equity          |
| SL Green Realty Corp.                 | SLG    | Equity          |
| SOMALOGIC, INC                        | SLGC   | Equity          |
| SUPER LEAGUE GAMING, INC.             | SLGG   | Equity          |
| SOL-GEL TECHNOLOGIES LTD.             | SLGL   | Equity          |
| Silgan Holdings Inc.                  | SLGN   | Equity          |
| STANDARD LITHIUM LTD.                 | SLI    | Equity          |
| SLM CORP                              | SLM    | Equity          |
| SOLUNA HOLDINGS, INC.                 | SLNH   | Equity          |
| Soleno Therapeutics, Inc.             | SLNO   | Equity          |
| Simulations Plus, Inc                 | SLP    | Equity          |
| SELECTQUOTE, INC.                     | SLQT   | Equity          |
| SELLAS LIFE SCIENCES GROUP, INC.      | SLS    | Equity          |
| ISHARES SILVER TRUST                  | SLV    | ETF             |
| SYLVAMO CORPORATION                   | SLVM   | Equity          |
| VanEck Vectors Steel ETF              | SLX    | ETF             |
| SM Energy Company                     | SM     | Equity          |
| Smartsheet Inc.                       | SMAR   | Equity          |
| SUPER MICRO COMPUTER INC              | SMCI   | Equity          |
| Sharps Compliance Corporation         | SMED   | Equity          |
| SUMITOMO MITSUI FINANCIAL GROUP, INC. | SMFG   | Equity          |
| Sema4 Holdings Corporation            | SMFR   | Equity          |
| The Scotts Miracle-Gro Company        | SMG    | Equity          |
| MARKET VECTORS SEMICONDUCTOR ETF      | SMH    | ETF             |
| SEACOR MARINE HOLDINGS INC            | SMHI   | Equity          |
| Summit Therapeutics Inc.              | SMMT   | Equity          |
| Simply Good Foods Co                  | SMPL   | Equity          |
| NuScale Power Corporation             | SMR    | Equity          |
| SmartRent, Inc.                       | SMRT   | Equity          |
| Smith Micro Software, Inc.            | SMSI   | Equity          |
| SEMTECH CORPORATION                   | SMTC   | Equity          |
| SIMILARWEB LTD.SIMILARWEB LTD.        | SMWB   | Equity          |
| SNAP-ON INCORPORATED                  | SNA    | Equity          |
| Snap, Inc                             | SNAP   | Equity          |
| Sleep Number Corporation              | SNBR   | Equity          |
| Synchronoss Technologies, Inc.        | SNCR   | Equity          |
| SUN COUNTRY AIRLINES HOLDINGS, INC.   | SNCY   | Equity          |
| Smart Sand, Inc.                      | SND    | Equity          |
| Sundial Growers Inc.                  | SNDL   | Equity          |
| Schneider National, Inc               | SNDR   | Equity          |
| Syndax Pharmaceuticals, Inc           | SNDX   | Equity          |
| SMITH & NEPHEW PLC                    | SNN    | Equity          |
| Snowflake Inc.                        | SNOW   | Equity          |
| CHINA PETROLEUM AND CHEMICAL CORP     | SNP    | Equity          |



| MIAX Options Securities as of 6/17/22            |        |                 |
|--|--------|-----------------|
| Company Name                                     | Symbol | Instrument Type |
| Synopsys Inc.                                    | SNPS   | Equity          |
| SYNOVUS FINANCIAL CORPORATION                    | SNV    | Equity          |
| Synnex Corporation                               | SNX    | Equity          |
| Sanofi   | SNY    | Equity          |
| SOUTHERN COMPANY                                 | SO     | Equity          |
| GLOBAL X SOCIAL MEDIA INDEX ETF                  | SOCL   | ETF             |
| SoFi Technologies, Inc.                          | SOFI   | Equity          |
| SOHU.COM INC.                                    | SOHU   | Equity          |
| Solaris Oilfield Infrastructure, Inc.            | SOI    | Equity          |
| ReneSola Ltd (ADS)                               | SOL    | Equity          |
| Electrameccanica Vehicles Corp.                  | SOLO   | Equity          |
| Sonoco Products Co.                              | SON    | Equity          |
| SONDER HOLDINGS INC.                             | SOND   | Equity          |
| Sonos, Inc.                                      | SONO   | Equity          |
| Sony Group Corporation                           | SONY   | Equity          |
| SOS Limited                                      | SOS    | Equity          |
| DIREXION DAILY SEMICONDUCTOR BULL 3X ETF         | SOXL   | ETF             |
| Direxion Daily Semiconductor Bear 3X ETF         | SOXS   | ETF             |
| iShares PHLX Semiconductor Index Fund            | SOXX   | ETF             |
| Teucrium Soybean ETF                             | SOYB   | ETF             |
| SP Plus Corporation                              | SP     | Equity          |
| DEFIANCE NEXT GEN SPAC DERIVED ETF               | SPAK   | Equity          |
| Spectrum Brands Holdings Inc.                    | SPB    | Equity          |
| Virgin Galactic Holdings, Inc.                   | SPCE   | Equity          |
| SPAC and New Issue ETF                           | SPCX   | Equity          |
| SIMON PROPERTY GROUP INC.                        | SPG    | Equity          |
| S&P Global Inc.                                  | SPGI   | Equity          |
| Suburban Propane Partners, L.P.                  | SPH    | Equity          |
| Invesco S&P 500 High Beta ETF                    | SPHB   | ETF             |
| Invesco S&P 500 High Dividend Low Volatility ETF | SPHD   | ETF             |
| SPI ENERGY CO LTD                                | SPI    | Equity          |
| SPIKES Volatility Index                          | SPIKE  | Index           |
| Spire Global, Inc.                               | SPIR   | Equity          |
| SPDR Portfolio S&P 500 ETF                       | SPLG   | ETF             |
| SPLUNK, INC.                                     | SPLK   | Equity          |
| PowerShares S&P 500 Low Volatility ETF           | SPLV   | ETF             |
| SeaSpine Holdings Corporation                    | SPNE   | Equity          |
| Sapiens International Corporation NV             | SPNS   | Equity          |
| Spok Holdings, Inc.                              | SPOK   | Equity          |
| Spotify Technology S.A.                          | SPOT   | Equity          |
| SPECTRUM PHARMACEUTICALS, INC.                   | SPPI   | Equity          |
| Spirit Aerosystems Holdings Inc                  | SPR    | Equity          |
| Spero Therapeutics Inc                           | SPRO   | Equity          |
| SPROUT SOCIAL INC                                | SPT    | Equity          |
| SPDR Portfolio Total Stock Market ETF            | SPTM   | ETF             |

| MIAX Options Securities as of 6/17/22               |        |                 |
|---|--------|-----------------|
| Company Name  | Symbol | Instrument Type |
| Spartan Stores, Inc.                                | SPTN   | Equity          |
| Sportsman's Warehouse Holdings, Inc.                | SPWH   | Equity          |
| SUNPOWER CORPORATION                                | SPWR   | Equity          |
| SPX Corporation                                     | SPXC   | Equity          |
| Direxion Daily S&P 500 Bull 3X Shares               | SPXL   | ETF             |
| Direxion Daily S&P 500 Bear 3X Shares (1:5 reverse) | SPXS   | ETF             |
| PROSHARES ULTRAPRO SHORT S&P500                     | SPXU   | ETF             |
| SPDR S&P 500 TRUST                                  | SPY    | ETF             |
| SPDR PORTFOLIO S&P 500 HIGH DIVIDEND                | SPYD   | ETF             |
| SPDR PORTFOLIO S&P 500 GROWTH ETF                   | SPYG   | ETF             |
| SPDR PORTFOLIO S&P 500 VALUE ETF                    | SPYV   | ETF             |
| Square, Inc.  | SQ     | Equity          |
| CHEMICAL & MINING CO. OF CHILE INC.                 | SQM    | Equity          |
| PROSHARES ULTRAPRO SHORT QQQ                        | SQQQ   | ETF             |
| Squarespace, Inc.                                   | SQSP   | Equity          |
| SPORTRADAR GROUP                                    | SRAD   | Equity          |
| SRAX, Inc.  | SRAX   | Equity          |
| Spirit Realty Capital, Inc.                         | SRC    | Equity          |
| STERICYCLE, INC.                                    | SRCL   | Equity          |
| Surmodics, Inc.                                     | SRDX   | Equity          |
| SEMPRA ENERGY                                       | SRE    | Equity          |
| ServiceSource International, Inc.                   | SREV   | Equity          |
| Seritage Growth Properties                          | SRG    | Equity          |
| Stoneridge, Inc.                                    | SRI    | Equity          |
| SPDR Blackstone Senior Loan ETF                     | SRLN   | Equity          |
| Sorrento Therapeutics, Inc.                         | SRNE   | Equity          |
| SAREPTA THERAPEUTICS, INC.                          | SRPT   | Equity          |
| SIERRA ONCOLOGY, INC.                               | SRRR   | Equity          |
| SCHOLAR ROCK HOLDING CORP.                          | SRRK   | Equity          |
| ProShares UltraShort Real Estate                    | SRS    | ETF             |
| SENSUS HEALTHCARE, INC                              | SRTS   | Equity          |
| ProShares UltraPro Short Russell2000                | SRTY   | ETF             |
| South State Corporation                             | SSB    | Equity          |
| Simpson Manufacturing Co., Inc.                     | SSD    | Equity          |
| SASOL LTD   | SSL    | Equity          |
| SS&C Technologies Holdings, Inc.                    | SSNC   | Equity          |
| PROSHARES ULTRA S&P500                              | SSO    | ETF             |
| The E.W. Scripps Company                            | SSP    | Equity          |
| SSR Mining Inc.                                     | SSRM   | Equity          |
| Sutter Rock Capital Corporation                     | SSSS   | Equity          |
| System1, Inc  | SST    | Equity          |
| SHUTTERSTOCK, INC.                                  | SSTK   | Equity          |
| STRATASYS INC.                                      | SSYS   | Equity          |
| Sensata Technologies Holding                        | ST     | Equity          |
| STAAR SURGICAL COMPANY                              | STAA   | Equity          |

| MIAX Options Securities as of 6/17/22     |        |                 |
|---|--------|-----------------|
| Company Name                              | Symbol | Instrument Type |
| Statera Biopharma, Inc                    | STAB   | Equity          |
| STAG Industrial, Inc.                     | STAG   | Equity          |
| ISTAR FINANCIAL INC.                      | STAR   | Equity          |
| STERIS Corp.                              | STE    | Equity          |
| Stem, Inc.                                | STEM   | Equity          |
| STEPSTONE GROUP INC                       | STEP   | Equity          |
| Stagwell Inc.                             | STGW   | Equity          |
| NEURONETICS, INC.                         | STIM   | Equity          |
| SunOpta Inc.                              | STKL   | Equity          |
| ONE GROUP HOSPITALITY, INC.               | STKS   | Equity          |
| Stellantis N.V.                           | STLA   | Equity          |
| STEEL DYNAMICS INC                        | STLD   | Equity          |
| STMicroelectronics NV                     | STM    | Equity          |
| StoneCo Ltd.                              | STNE   | Equity          |
| SCORPIO TANKERS, INC.                     | STNG   | Equity          |
| STORE Capital Corporation                 | STOR   | Equity          |
| Sitio Royalties Corporation               | FLMN   | Equity          |
| Sitio Royalties Corporation               | STR    | Equity          |
| STRAYER EDUCATION, INC.                   | STRA   | Equity          |
| Sterling Construction Company Inc.        | STRL   | Equity          |
| SUTRO BIOPHARMA, INC.                     | STRO   | Equity          |
| STARRY GROUP HOLDINGS, INC.               | STRY   | Equity          |
| STATE STREET CORPORATION                  | STT    | Equity          |
| Starwood Property Trust, Inc.             | STWD   | Equity          |
| SEAGATE TECHNOLOGY PUBLIC LIMITED COMPANY | STX    | Equity          |
| STEREOTAXIS, INC.                         | STXS   | Equity          |
| CONSTELLATION BRANDS INC.                 | STZ    | Equity          |
| SUNCOR ENERGY INC.                        | SU     | Equity          |
| Sun Communities, Inc.                     | SUI    | Equity          |
| Summit Materials, Inc.                    | SUM    | Equity          |
| SUMO LOGIC, INC.                          | SUMO   | Equity          |
| SUNOCO L.P.                               | SUN    | Equity          |
| Sunlight Financial Holdings, Inc          | SUNL   | Equity          |
| SUNWORKS, INC.                            | SUNW   | Equity          |
| SUPERIOR INDUSTRIES INT                   | SUP    | Equity          |
| SUPERNUS PHARMACEUTICALS, INC.            | SUPN   | Equity          |
| GRUPO SUPERVIELLE SA                      | SUPV   | Equity          |
| SURFACE ONCOLOGY, INC.                    | SURF   | Equity          |
| Service Properties Trust                  | SVC    | Equity          |
| SILVERCORP METALS INC                     | SVM    | Equity          |
| Savara Inc.                               | SVRA   | Equity          |
| ProShares Short VIX Short-Term Futures    | SVXY   | ETF             |
| SHOCKWAVE MEDICAL INC.                    | SWAV   | Equity          |
| Smith & Wesson Brands, Inc. (SWBI)        | SWBI   | Equity          |
| Solarwinds Corp.                          | SWI    | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| SIERRA WIRELESS, INC                   | SWIR   | Equity          |
| Stanley Black & Decker                 | SWK    | Equity          |
| SKYWORKS SOLUTIONS INC.                | SWKS   | Equity          |
| Schweitzer-Mauduit International, Inc  | SWM    | Equity          |
| SOUTHWESTERN ENERGY COMPANY            | SWN    | Equity          |
| SPRINGWORKS THERAPEUTICS INC           | SWTX   | Equity          |
| SunCoke Energy, Inc.                   | SXC    | Equity          |
| SO-YOUNG INTERNATIONAL, INC.           | SY     | Equity          |
| SYNLOGIC INC                           | SYBX   | Equity          |
| SYNCHRONY FINANCIAL                    | SYF    | Equity          |
| STRYKER CORP                           | SYK    | Equity          |
| SYNAPTICS, INC.                        | SYNA   | Equity          |
| Syneos Health, Inc.                    | SYNH   | Equity          |
| SYPRIS SOLUTIONS, INC.                 | SYPR   | Equity          |
| Syros Pharmaceuticals, Inc.            | SYRS   | Equity          |
| SYSCO CORPORATION                      | SYI    | Equity          |
| AT&T, INC.                             | T      | Equity          |
| TravelCenters of America LLC           | TA     | Equity          |
| TRANSALTA CORP                         | TAC    | Equity          |
| Takeda Pharmaceutical Company Limited  | TAK    | Equity          |
| TAL International Group Inc            | TAL    | Equity          |
| Talkspace, Inc.                        | TALK   | Equity          |
| Talos Energy Inc.                      | TALO   | Equity          |
| Guggenheim Solar ETF                   | TAN    | ETF             |
| Molson Coors Brewing Co.               | TAP    | Equity          |
| PROTARA THERAPEUTICS, INC.             | TARA   | Equity          |
| TARSUS PHARMACEUTICALS, INC.           | TARS   | Equity          |
| TASKUS, INC.                           | TASK   | Equity          |
| Carrols Restaurant Group Inc           | TAST   | Equity          |
| Bancorp Inc/DE                         | TBBK   | Equity          |
| ProShares Short 20+ Year Treasury      | TBF    | ETF             |
| TrueBlue, Inc.                         | TBI    | Equity          |
| TRUMPH BANCORP INC                     | TBK    | Equity          |
| Taboola.com Ltd.                       | TBLA   | Equity          |
| Territorial Bancorp Inc.               | TBNK   | Equity          |
| Theravance Biopharma, Inc.             | TBPH   | Equity          |
| PROSHARES ULTRASHORT 20+ YEAR TREASURY | TBT    | ETF             |
| Texas Capital Bancshares, Inc.         | TCBI   | Equity          |
| TRICIDA INC                            | TCDA   | Equity          |
| Tactile Systems Technology I           | TCMD   | Equity          |
| TRICON RESIDENTIAL INC                 | TCN    | Equity          |
| Trip.com Group Limited                 | TCOM   | Equity          |
| TRACON PHARMACEUTICALS, INC.           | TCON   | Equity          |
| TCR2 THERAPEUTICS, INC.                | TCRR   | Equity          |
| Alaunos Therapeutics, Inc.             | TCRT   | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| THE CONTAINER STORE GROUP, INC.        | TCS    | Equity          |
| TUCOWS, INC                            | TCX    | Equity          |
| TORONTO DOMINION BANK                  | TD     | Equity          |
| Teradata Corp.                         | TDC    | Equity          |
| TransDigm Group, Inc.                  | TDG    | Equity          |
| Teladoc, Inc.                          | TDOC   | Equity          |
| TELEPHONE & DATA SYSTEMS INC.          | TDS    | Equity          |
| THREDUP INC                            | TDUP   | Equity          |
| TIDEWATER INC.                         | TDW    | Equity          |
| Atlassian Corporation Plc              | TEAM   | Equity          |
| Bio-Techne Corporation                 | TECH   | Equity          |
| Teck Resources Limited                 | TECK   | Equity          |
| Direxion Daily Technology Bull 3X ETF  | TECL   | ETF             |
| Direxion Daily Technology Bear 3X ETF  | TECS   | ETF             |
| TELEFONICA S.A.                        | TEF    | Equity          |
| TE Connectivity Ltd.                   | TEL    | Equity          |
| Tellurian Inc.                         | TELL   | Equity          |
| TENNECO INC                            | TEN    | Equity          |
| TENABLE HOLDINGS INC                   | TENB   | Equity          |
| Telecom Argentina S.A.                 | TEO    | Equity          |
| TERADYNE,INC                           | TER    | Equity          |
| TEVA PHARMACEUTICAL INDUSTRIES LIMITED | TEVA   | Equity          |
| TEREX CORPORATION                      | TEX    | Equity          |
| Truist Financial Corporation           | TFC    | Equity          |
| TFF Pharmaceuticals, Inc               | TFFP   | Equity          |
| TFI INTERNATIONAL INC.                 | TFII   | Equity          |
| TFS Financial Corporation              | TFSL   | Equity          |
| Teleflex Incorporated                  | TFX    | Equity          |
| Tredegar Corp                          | TG     | Equity          |
| Taseko Mines Limited                   | TGB    | Equity          |
| Textainer Group Holdings Limited       | TGH    | Equity          |
| Triumph Group, Inc.                    | TGI    | Equity          |
| TECNOGLASS INC.                        | TGLS   | Equity          |
| TEGNA, Inc.                            | TGNA   | Equity          |
| TARGET CORPORATION                     | TGT    | Equity          |
| TG THERAPEUTICS, INC.                  | TGTX   | Equity          |
| TARGET HOSPITALITY CORP.               | TH     | Equity          |
| TENET HEALTHCARE CORP (25 shrs)        | THC    | Equity          |
| TUSCAN HOLDINGS CORP. II               | THCA   | Equity          |
| CANNABIS ETF                           | THCX   | ETF             |
| iShares MSCI Thailand ETF              | THD    | ETF             |
| THOR INDUSTRIES INC                    | THO    | Equity          |
| Thermon Group Holdings Inc             | THR    | Equity          |
| Gentherm Inc                           | THRM   | Equity          |
| THRYV HOLDINGS, INC.                   | THRY   | Equity          |

| MIAX Options Securities as of 6/17/22          |        |                 |
|--|--------|-----------------|
| Company Name                                   | Symbol | Instrument Type |
| Treehouse Foods, Inc.                          | THS    | Equity          |
| UP FINTECH HOLDINGS LIMITED                    | TIGR   | Equity          |
| Interface, Inc.                                | TILE   | Equity          |
| iShares Barclays TIPS Bond Fund                | TIP    | ETF             |
| TIPTREE INC.                                   | TIPT   | Equity          |
| Team, Inc.                                     | TISI   | Equity          |
| Titan Machinery, Inc.                          | TITN   | Equity          |
| THE TJX COMPANIES, INC.                        | TJX    | Equity          |
| Teekay Corp                                    | TK     | Equity          |
| TAKUNG ART LTD                                 | TKAT   | Equity          |
| Turkcell Iletisim Hizmetleri AS                | TKC    | Equity          |
| TIMKEN COMPANY                                 | TKR    | Equity          |
| iShares 10-20 Year Treasury Bond ETF           | TLH    | ETF             |
| TALIS BIOMEDICAL CORP.                         | TLIS   | Equity          |
| Tilray, Inc.                                   | TLRY   | Equity          |
| TELOS CORPORATION                              | TLS    | Equity          |
| TIZIANA LIFE SCIENCES PLC                      | TLSA   | Equity          |
| ISHARES 20+ YEAR TREASURY BOND ETF             | TLT    | ETF             |
| Tilly's Inc.                                   | TLYS   | Equity          |
| TOYOTA MOTOR CORP                              | TM     | Equity          |
| TMC the metals company Inc.                    | TMC    | Equity          |
| TREACE MEDICAL CONCEPTS, INC.                  | TMCI   | Equity          |
| TRANSMEDICS GROUP, INC.                        | TMDX   | Equity          |
| Tencent Music Entertainment Group              | TME    | Equity          |
| DIREXION DAILY 20+ YR TRSY BULL 3X ETF         | TMF    | ETF             |
| Taylor Morrison Home Corp                      | TMHC   | Equity          |
| Thermo Fisher Scientific Inc.                  | TMO    | Equity          |
| Trilogy Metals Inc.                            | TMQ    | Equity          |
| TimkenSteel Corporation                        | TMST   | Equity          |
| T-MOBILE US, INC.                              | TMUS   | Equity          |
| Direxion Daily 20 Year Treasury Bear 3X Shares | TMV    | ETF             |
| Terminix Global Holdings, Inc.                 | TMX    | Equity          |
| DIREXION DAILY SMALL CAP BULL 3X SHARES        | TNA    | ETF             |
| Tandem Diabetes Care, Inc.                     | TNDM   | Equity          |
| TRINET GROUP, INC.                             | TNET   | Equity          |
| Teekay Tankers Ltd                             | TNK    | Equity          |
| Travel + Leisure Co.                           | TNL    | Equity          |
| TSAKOS ENERGY NAVIGATION LTD                   | TNP    | Equity          |
| CAMBRIA CANNABIS ETF                           | TOKE   | ETF             |
| TOLL BROTHERS INC.                             | TOL    | Equity          |
| TOAST, INC                                     | TOST   | Equity          |
| TUNIU CORPORATION                              | TOUR   | Equity          |
| TowneBank                                      | TOWN   | Equity          |
| Turning Piont Brands Inc                       | TPB    | Equity          |
| Tutor Perini Corporation                       | TPC    | Equity          |

| MIAX Options Securities as of 6/17/22   |        |                 |
|---|--------|-----------------|
| Company Name                            | Symbol | Instrument Type |
| TPG INC                                 | TPG    | Equity          |
| TPG PACE BENEFICIAL FINANCE CORPORATION | TPGY   | Equity          |
| TRI POINTE HOMES, INC.                  | TPH    | Equity          |
| TPI Composites Inc                      | TPIC   | Equity          |
| Tapestry, Inc.                          | TPR    | Equity          |
| TriplePoint Venture Growth BDC Corp.    | TPVG   | Equity          |
| TEMPUR-PEDIC INTERNATIONAL INC.         | TPX    | Equity          |
| ProShares Ultra Pro QQQ                 | TQQQ   | ETF             |
| Tootsie Roll Industries Inc             | TR     | Equity          |
| LendingTree, Inc.                       | TREE   | Equity          |
| Trex Co. Inc.                           | TREX   | Equity          |
| Targa Resources Corp.                   | TRGP   | Equity          |
| Tabula Rasa HealthCare Inc              | TRHC   | Equity          |
| Thomson Reuters Corporation             | TRI    | Equity          |
| Trinity Biotech plc                     | TRIB   | Equity          |
| TRINITY CAPITAL, INC.                   | TRIN   | Equity          |
| TRIPADVISOR INC.                        | TRIP   | Equity          |
| TRIMBLE NAVIGATION LIMITED              | TRMB   | Equity          |
| Trustmark Corporation                   | TRMK   | Equity          |
| TRINITY INDUSTRIES INC.                 | TRN    | Equity          |
| TROOPS, Inc.                            | TROO   | Equity          |
| T. ROWE PRICE GROUP INC.                | TROW   | Equity          |
| Tronox Ltd.                             | TROX   | Equity          |
| TransCanada Corp.                       | TRP    | Equity          |
| Turquoise Hill Resources Ltd.           | TRQ    | Equity          |
| Triton International Ltd                | TRTN   | Equity          |
| TPG RE Finance Trust, Inc.              | TRTX   | Equity          |
| TransUnion                              | TRU    | Equity          |
| TRUECAR, INC.                           | TRUE   | Equity          |
| Trupanion, Inc.                         | TRUP   | Equity          |
| THE TRAVELERS COMPANIES, INC.           | TRV    | Equity          |
| trivago N.V.                            | TRVG   | Equity          |
| Trevena, Inc.                           | TRVN   | Equity          |
| Tanzanian Royalty Exploration           | TRX    | Equity          |
| TENARIS SA                              | TS     | Equity          |
| TRACTOR SUPPLY COMPANY                  | TSCO   | Equity          |
| Trinseo S.A.                            | TSE    | Equity          |
| TOWER SEMICONDUCTOR LTD.                | TSEM   | Equity          |
| TESLA MOTORS, INC.                      | TSLA   | Equity          |
| TAIWAN SEMICONDUCTOR MFG. CO.           | TSM    | Equity          |
| TYSON FOODS, INC.                       | TSN    | Equity          |
| TUSIMPLE HOLDINGS INC                   | TSP    | Equity          |
| Townsquare Media, Inc.                  | TSQ    | Equity          |
| Trane Technologies plc                  | TT     | Equity          |
| THE TORO COMPANY                        | TTC    | Equity          |

| MIAX Options Securities as of 6/17/22           |        |                 |
|---|--------|-----------------|
| Company Name                                    | Symbol | Instrument Type |
| Tattooed Chef, Inc.                             | TTCF   | Equity          |
| The Trade Desk, Inc.                            | TTD    | Equity          |
| TotalEnergies SE                                | TTE    | Equity          |
| TTEC Holdings, Inc.                             | TTEC   | Equity          |
| Tetra Tech, Inc.                                | TTEK   | Equity          |
| TechTarget, Inc.                                | TTGT   | Equity          |
| TETRA Technologies, Inc.                        | TTI    | Equity          |
| Tata Motors Ltd.                                | TTM    | Equity          |
| TTM Technologies, Inc.                          | TTMI   | Equity          |
| Titan Pharmaceuticals Inc.                      | TTNP   | Equity          |
| T2 Biosystems, Inc.                             | TTOO   | Equity          |
| ProShares UltraPro Short 20+ Year Treasury      | TTT    | ETF             |
| TAKE-TWO INTERACTIVE                            | TTWO   | Equity          |
| Telus Corporation                               | TU     | Equity          |
| TUESDAY MORNING CORPORATION                     | TUEM   | Equity          |
| Tufin Software Technologies Ltd                 | TUFN   | Equity          |
| Tupperware Brands Corp                          | TUP    | Equity          |
| ISHARES MSCI TURKEY                             | TUR    | ETF             |
| 180 Degree Capital Corporation                  | TURN   | Equity          |
| Mammoth Energy Services Inc                     | TUSK   | Equity          |
| TUYA INC  | TUYA   | Equity          |
| GRUPO TELEVISA, S.A.B.                          | TV     | Equity          |
| Travere Therapeutics, Inc                       | TVTX   | Equity          |
| Tivity Health, Inc.                             | TVTY   | Equity          |
| Tradeweb Markets Inc.                           | TW     | Equity          |
| Titan International, Inc.                       | TWI    | Equity          |
| THOUGHTWORKS HOLDINGS                           | TWKS   | Equity          |
| Twilio, Inc.                                    | TWLO   | Equity          |
| Proshares UltrShort Russell 2000(reverse split) | TWM    | Equity          |
| TAILWIND ACQUISITION CORP.                      | TWND   | Equity          |
| Hostess Brands, Inc.                            | TWNK   | Equity          |
| Two Harbors Investment Corporation              | TWO    | Equity          |
| 2U, Inc.  | TWOU   | Equity          |
| TWIST BIOSCIENCE CORP.                          | TWST   | Equity          |
| TWITTER INC.                                    | TWTR   | Equity          |
| Ternium S.A.                                    | TX     | Equity          |
| 10X Genomics Inc                                | TXG    | Equity          |
| THERAPEUTICSMD, INC                             | TXMD   | Equity          |
| TEXAS INSTRUMENTS INC.                          | TXN    | Equity          |
| Texas Roadhouse, Inc.                           | TXRH   | Equity          |
| TEXTRON INC.                                    | TXT    | Equity          |
| Tyler Technologies, Inc.                        | TYL    | Equity          |
| TYME Technologies Inc                           | TYME   | Equity          |
| DIREXION DAILY SMALL CAP BEAR 3X SHARES         | TZA    | ETF             |
| Travelzoo, Inc.                                 | TZOO   | Equity          |



| MIAX Options Securities as of 6/17/22       |        |                 |
|---|--------|-----------------|
| Company Name                                | Symbol | Instrument Type |
| UNITY SOFTWARE, INC.                        | U      | Equity          |
| UNDER ARMOUR, INC.                          | UA     | Equity          |
| Under Armour, Inc.                          | UAA    | Equity          |
| UNITED CONTINENTAL HOLDINGS, INC.           | UAL    | Equity          |
| US Antimony Corp.                           | UAMY   | Equity          |
| CVR Partners LP                             | UAN    | Equity          |
| AGEAGLE AERIAL SYSTEM INC.                  | UAVS   | Equity          |
| Urstadt Biddle Properties Inc               | UBA    | Equity          |
| Uber Technologies, Inc.                     | UBER   | Equity          |
| UBS Group Ag                                | UBS    | Equity          |
| UNITY BIOTECHNOLOGY INC.                    | UBX    | Equity          |
| PROSHARES ULTRA DJ-UBS CRUDE OIL            | UCO    | ETF             |
| Ultra Clean Holdings, Inc.                  | UCTT   | Equity          |
| UDEMY, INC.                                 | UDMY   | Equity          |
| PowerShares DB US Dollar Index Bearish Fund | UDN    | ETF             |
| ProShares UltraPro Dow30                    | UDOW   | ETF             |
| UDR, Inc.                                   | UDR    | Equity          |
| Urban Edge Properties                       | UE     | Equity          |
| Uranium Energy Corp                         | UEC    | Equity          |
| UNIVERSAL ELECTRONICS, INC.                 | UEIC   | Equity          |
| Universal Forest Products, Inc.             | UFPI   | Equity          |
| United States Gasoline                      | UGA    | ETF             |
| UGI Corporation                             | UGI    | Equity          |
| ProShares Ultra Gold                        | UGL    | ETF             |
| Ultrapar Participacoes SA                   | UGP    | Equity          |
| UNIVERSAL HEALTH SERVICES INC               | UHS    | Equity          |
| Ubiquiti Inc.                               | UI     | Equity          |
| UNITED INSURANCE HOLDINGS CORPORATION       | UIHC   | Equity          |
| UNISYS CORPORATION                          | UIS    | Equity          |
| Unilever PLC                                | UL     | Equity          |
| Frontier Group Holdings, Inc.               | ULCC   | Equity          |
| ULTA SALON COSMETICS & FRAGRANCE INC        | ULTA   | Equity          |
| United Microelectronics Corporation         | UMC    | Equity          |
| UNITED NATURAL FOODS, INC.                  | UNFI   | Equity          |
| UNITED STATES NATURAL GAS                   | UNG    | ETF             |
| UNITEDHEALTH GROUP INCORPORATED             | UNH    | Equity          |
| Uniti Group Inc.                            | UNIT   | Equity          |
| Unum Group                                  | UNM    | Equity          |
| UNION PACIFIC CORPORATION                   | UNP    | Equity          |
| Univar Inc.                                 | UNVR   | Equity          |
| URBAN ONE INC                               | UONE   | Equity          |
| URBAN ONE INC                               | UONEK  | Equity          |
| Wheels Up Experience Inc.                   | UP     | Equity          |
| UpHealth, Inc                               | UPH    | Equity          |
| Upland Software, Inc.                       | UPLD   | Equity          |

| MIAX Options Securities as of 6/17/22  |        |                 |
|--|--------|-----------------|
| Company Name                           | Symbol | Instrument Type |
| ProShares Ultrapro S&P 500             | UPRO   | ETF             |
| UNITED PARCEL SERVICE, INC.            | UPS    | Equity          |
| UPSTART HOLDINGS, INC.                 | UPST   | Equity          |
| Upwork Inc.                            | UPWK   | Equity          |
| Global X Uranium ETF                   | URA    | ETF             |
| URBAN OUTFITTERS INC                   | URBN   | Equity          |
| ProShares Ultra Real Estate            | URE    | ETF             |
| Urogen Pharma Ltd                      | URGN   | Equity          |
| UNITED RENTALS, INC.                   | URI    | Equity          |
| NORTSHORE GLOBAL URANIUM MINING ETF    | URNM   | ETF             |
| URANIUM ROYALTY CORP                   | UROY   | Equity          |
| ProShares UltraPro Russell2000         | URTY   | ETF             |
| USA COMPRESSION PARTNERS, L.P.         | USAC   | Equity          |
| USA TRUCK INC                          | USAK   | Equity          |
| U.S. BANCORP                           | USB    | Equity          |
| ProShares Ultra Semiconductors         | USD    | ETF             |
| US Foods Holding Corp.                 | USFD   | Equity          |
| United States 12 Month Oil Fund, LP    | USL    | ETF             |
| U.S. Cellular Corporation              | USM    | Equity          |
| iShares MSCI USA Minimum Volatility    | USMV   | ETF             |
| USANA Health Sciences, Inc.            | USNA   | Equity          |
| UNITED STATES OIL FUND                 | USO    | ETF             |
| US PHYSICAL THERAPY INC                | USPH   | Equity          |
| US Xpress Enterprises Inc              | USX    | Equity          |
| UNITED THERAPEUTICS CORP               | UTHR   | Equity          |
| Universal Technical Institute, Inc.    | UTI    | Equity          |
| Utz Brands, Inc.                       | UTZ    | Equity          |
| POWERSHARES DB US DOLLAR INDEX BULLISH | UUP    | ETF             |
| Energy Fuels Inc.                      | UUUU   | Equity          |
| UNIVERSAL INSURANCE HOLDINGS, INC.     | UVE    | Equity          |
| UNIVERSAL CORPORATION                  | UVV    | Equity          |
| PROSHARES ULTRA VIX SHORT-TERM FUT ETF | UVXY   | ETF             |
| ProShares Ultra Russell2000            | UWM    | ETF             |
| UWM Holdings Corporation               | UWMC   | Equity          |
| Uxin Limited                           | UXIN   | Equity          |
| ProShares Ultra Financials             | UYG    | ETF             |
| VISA INC.                              | V      | Equity          |
| Marriott Vacations Worldwide Corp.     | VAC    | Equity          |
| VALARIS LIMITED                        | VAL    | Equity          |
| VALE S.A.                              | VALE   | Equity          |
| VAPOTHERM, INC.                        | VAPO   | Equity          |
| INNOVATE Corp.                         | VATE   | Equity          |
| Vanguard Small-Cap ETF                 | VB     | ETF             |
| VBI Vaccines Inc.                      | VBIV   | Equity          |
| Vanguard Small-Cap Growth ETF          | VBK    | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| Vascular Biogenics Ltd.               | VBLT   | Equity          |
| Vanguard Small-Cap Value ETF          | VBR    | ETF             |
| Veritex Holdings Inc                  | VBTX   | Equity          |
| Visteon Corp.                         | VC     | Equity          |
| Vericel Corporation                   | VCEL   | Equity          |
| VACCINEX, INC.                        | VCNX   | Equity          |
| Veracyte, Inc.                        | VCYT   | Equity          |
| Vanguard Energy ETF                   | VDE    | ETF             |
| Vanguard FTSE Developed Markets ETF   | VEA    | ETF             |
| Vectrus, Inc.                         | VEC    | Equity          |
| VEECO INSTRUMENTS                     | VECO   | Equity          |
| VEEVA SYSTEMS INC.                    | VEEV   | Equity          |
| VELOCITY FINANCIAL, INC               | VEL    | Equity          |
| VEON Ltd.                             | VEON   | Equity          |
| Veritone, Inc.                        | VERI   | Equity          |
| Veru Inc                              | VERU   | Equity          |
| Vermilion Energy Inc                  | VET    | Equity          |
| VF CORPORATION                        | VFC    | Equity          |
| Village Farms International, Inc.     | VFF    | Equity          |
| Vanguard Financials ETF               | VFH    | ETF             |
| Vanguard FTSE Europe ETF              | VGK    | ETF             |
| VECTOR GROUP LTD.                     | VGR    | Equity          |
| Vanguard Information Technology ETF   | VGT    | Equity          |
| VIRNETX HOLDING CORP                  | VHC    | Equity          |
| Vanguard Health Care ETF              | VHT    | ETF             |
| Via Renewables, Inc.                  | VIA    | Equity          |
| Viavi Solutions Inc.                  | VIAV   | Equity          |
| VICI Properties Inc.                  | VICI   | Equity          |
| Vicor Corporation                     | VICR   | Equity          |
| View, Inc.                            | VIEW   | Equity          |
| Vanguard Dividend Appreciation ETF    | VIG    | ETF             |
| GAUCHO GROUP HOLDINGS, INC.           | VINO   | Equity          |
| VIPSHOP HOLDINGS LIMITED              | VIPS   | Equity          |
| Vir Biotechnology, Inc.               | VIR    | Equity          |
| Virtu Financial, Inc.                 | VIRT   | Equity          |
| Viracta Therapeutics, Inc.            | VIRX   | Equity          |
| VISLINK TECHNOLOGIES, INC.            | VISL   | Equity          |
| VISTA OIL & GAS SAB DE CV             | VIST   | Equity          |
| VITAL FARMS, INC.                     | VITL   | Equity          |
| Telefonica Brasil S.A.                | VIV    | Equity          |
| Meridian Bioscience Inc.              | VIVO   | Equity          |
| ProShares VIX Mid-Term Futures        | VIXM   | ETF             |
| ProShares VIX Short-Term Futures ETF  | VIXY   | ETF             |
| Viking Therapeutics, Inc.             | VKTX   | Equity          |
| Velo3D, Inc                           | VLD    | Equity          |

| MIAX Options Securities as of 6/17/22 |        |                 |
|---------------------------------------|--------|-----------------|
| Company Name                          | Symbol | Instrument Type |
| Velodyne Lidar, Inc.                  | VLDR   | Equity          |
| VALERO ENERGY CORPORATION             | VLO    | Equity          |
| Controladora Vuela Compania de        | VLRS   | Equity          |
| Volta Inc                             | VLTA   | Equity          |
| VALLEY NATIONAL BANCORP               | VLY    | Equity          |
| VULCAN MATERIALS COMPANY              | VMC    | Equity          |
| VIMEO, INC.                           | VMEO   | Equity          |
| Valmont Industries, Inc.              | VMI    | Equity          |
| VMWARE, INC.                          | VMW    | Equity          |
| Vanda Pharmaceuticals, Inc.           | VNDA   | Equity          |
| 21Vianet Group Inc                    | VNET   | Equity          |
| VORNADO REALTY TRUST                  | VNO    | Equity          |
| Viper Energy Partners LP              | VNOM   | Equity          |
| Vanguard REIT ETF                     | VNQ    | ETF             |
| VONTIER CORP                          | VNT    | Equity          |
| Venator Materials PLC                 | VNTR   | Equity          |
| Voc Energy Trust                      | VOC    | Equity          |
| VODAFONE GROUP PUBLIC LIMITED COMPANY | VOD    | Equity          |
| Vanguard Mid-Cap Value ETF            | VOE    | ETF             |
| Vanguard S&P 500 ETF                  | VOO    | ETF             |
| Virgin Orbit Holdings, Inc.           | VORB   | Equity          |
| VOXX International Corporation        | VOXX   | Equity          |
| VOYA FINANCIAL INC.                   | VOYA   | Equity          |
| Vanguard Utilities Index Fund ETF     | VPU    | ETF             |
| Vera Bradley, Inc.                    | VRA    | Equity          |
| THE GLIMPSE GROUP INC                 | VRAR   | Equity          |
| ViewRay, Inc.                         | VRAY   | Equity          |
| VERRICA PHARMACEUTICALS INC.          | VRCA   | Equity          |
| VIRIDIAN THERAPEUTICS, INC.           | VRDN   | Equity          |
| Veris Residential, Inc.               | VRE    | Equity          |
| Varex Imaging Corporation             | VREX   | Equity          |
| VROOM INC.                            | VRM    | Equity          |
| VERONA PHARMA PLC                     | VRNA   | Equity          |
| Varonis Systems, Inc.                 | VRNS   | Equity          |
| Verint Systems, Inc.                  | VRNT   | Equity          |
| VERRA MOBILITY CORP.                  | VRRM   | Equity          |
| Verisk Analytics, Inc.                | VRSK   | Equity          |
| VERISIGN, INC.                        | VRSN   | Equity          |
| VERTIV HOLDINGS CO                    | VRT    | Equity          |
| Veritiv Corporation                   | VRTV   | Equity          |
| VERTEX PHARMACEUTICALS INCORPORATED   | VRTX   | Equity          |
| ViaSat, Inc.                          | VSAT   | Equity          |
| VICTORIAS SECRET & CO                 | VSCO   | Equity          |
| VISHAY INTERTECHNOLOGY                | VSH    | Equity          |
| Vistra Energy Corp.                   | VST    | Equity          |

| MIAX Options Securities as of 6/17/22              |        |                 |
|--|--------|-----------------|
| Company Name                                       | Symbol | Instrument Type |
| Verastem, Inc.                                     | VSTM   | Equity          |
| Vista Outdoor Inc.                                 | VSTO   | Equity          |
| Vanguard Total World Stock ETF                     | VT     | ETF             |
| VTEX   | VTEX   | Equity          |
| Vanguard Total Stock Market ETF                    | VTI    | ETF             |
| VANGUARD SHORT-TERM INFLATION-PROTECTED SECURITIES | VTIP   | ETF             |
| VERTEX ENERGY, INC.                                | VTNR   | Equity          |
| BRISTOW GROUP INC                                  | VTOL   | Equity          |
| Ventas, Inc.                                       | VTR    | Equity          |
| Viatis Inc.  | VTRS   | Equity          |
| VIRTRA, INC.                                       | VTSI   | Equity          |
| Vanguard Value ETF                                 | VTV    | ETF             |
| Vanguard Russell 2000 ETF                          | VTWO   | ETF             |
| Vanguard Growth ETF                                | VUG    | ETF             |
| Vuzix Corporation                                  | VUZI   | Equity          |
| Vivint Smart Home, Inc.                            | VVNT   | Equity          |
| VIVOS THERAPEUTICS, INC.                           | VVOS   | Equity          |
| VIVOPOWER INTERNATIONAL PLC                        | VVPR   | Equity          |
| Valvoline Inc.                                     | VVV    | Equity          |
| Vintage Wine Estates, Inc.                         | VWE    | Equity          |
| Vanguard MSCI Emerging Markets ETF                 | VWO    | ETF             |
| VAXART, INC.                                       | VXRT   | Equity          |
| Vanguard Total International Stock ETF             | VXUS   | ETF             |
| iPath Series B S&P 500 VIX Short-Term Futures ETN  | VXX    | ETF             |
| iPath Series B S&P 500 VIX Mid-Term Futures ETN    | VXZ    | ETF             |
| VY GLOBAL GROWTH                                   | VYGG   | Equity          |
| Voyager Therapeutics, Inc.                         | VYGR   | Equity          |
| Vanguard High Dividend Yield ETF                   | VYM    | ETF             |
| VYNE THERAPEUTICS INC                              | VYNE   | Equity          |
| VERIZON COMMUNICATIONS INC.                        | VZ     | Equity          |
| VIZIO HOLDING CORP                                 | VZIO   | Equity          |
| Wayfair Inc.                                       | W      | Equity          |
| Westinghouse Air Brake Technologies Corporation    | WAB    | Equity          |
| WASHINGTON FEDERAL INC.                            | WAFD   | Equity          |
| Western Alliance Bancorp                           | WAL    | Equity          |
| WATERS CORPORATION                                 | WAT    | Equity          |
| Energous Corporation                               | WATT   | Equity          |
| WEIBO CORP. (ADR)                                  | WB     | Equity          |
| Walgreens Boots Alliance, Inc.,                    | WBA    | Equity          |
| Warner Bros. Discovery, Inc.                       | WBD    | Equity          |
| WEBSTER FINANCIAL CORPORATION                      | WBS    | Equity          |
| Wallbox N.V.                                       | WBX    | Equity          |
| WESCO INTERNATIONAL                                | WCC    | Equity          |
| WISDOMTREE CLOUD COMPUTING FUND                    | WCLD   | ETF             |
| Waste Connections Inc.                             | WCN    | Equity          |

| MIAX Options Securities as of 6/17/22      |        |                 |
|--|--------|-----------------|
| Company Name                               | Symbol | Instrument Type |
| Walker & Dunlop, Inc.                      | WD     | Equity          |
| Workday, Inc.                              | WDAY   | Equity          |
| WESTERN DIGITAL CORPORATION                | WDC    | Equity          |
| WD-40 Company                              | WDFC   | Equity          |
| WeWork Inc.                                | WE     | Equity          |
| Teucrium Wheat ETF                         | WEAT   | ETF             |
| WEBER, INC.                                | WEBR   | Equity          |
| WISCONSIN ENERGY CORP.                     | WEC    | Equity          |
| WEJO GROUP LTD                             | WEJO   | Equity          |
| Welltower Inc.                             | WELL   | Equity          |
| The Wendy's Company                        | WEN    | Equity          |
| WERNER ENTERPRISES INC.                    | WERN   | Equity          |
| Western Midstream Partners L.P.            | WES    | Equity          |
| WisdomTree Investments, Inc                | WETF   | Equity          |
| WEX Inc.                                   | WEX    | Equity          |
| WELLS FARGO & COMPANY                      | WFC    | Equity          |
| WEST FRASER TIMBER CO. LTD.                | WFG    | Equity          |
| WEATHERFORD INTERNATIONAL PLC              | WFRD   | Equity          |
| WINNEBAGO INDUSTRIES, INC                  | WGO    | Equity          |
| Wyndham Hotels & Resorts, Inc.             | WH     | Equity          |
| Cactus Inc                                 | WHD    | Equity          |
| WHIRLPOOL CORPORATION                      | WHR    | Equity          |
| WIMI HOLOGRAM CLOUD INC                    | WIMI   | Equity          |
| Wingstop Inc.                              | WING   | Equity          |
| ENCORE WIRE CORPORATION                    | WIRE   | Equity          |
| SUMMIT WIRELESS TECHNOLOGIES, INC.         | WISA   | Equity          |
| ContextLogic Inc.                          | WISH   | Equity          |
| WIPRO LTD.                                 | WIT    | Equity          |
| WIX.COM LTD.                               | WIX    | Equity          |
| Workiva Inc.                               | WK     | Equity          |
| WISEKEY INTERNATIONAL HOLDING LTD.         | WKEY   | Equity          |
| Workhorse Group Inc.                       | WKHS   | Equity          |
| WORKSPORT, LTD                             | WKSP   | Equity          |
| Westlake Chemical Corp                     | WLK    | Equity          |
| Westlake Chemical Partners LP              | WLKP   | Equity          |
| WHITING PETROLEUM CORPORATION              | WLL    | Equity          |
| WASTE MANAGEMENT, INC.                     | WM     | Equity          |
| WILLIAMS COMPANIES, INC.                   | WMB    | Equity          |
| Western Asset Mortgage Capital Corporation | WMC    | Equity          |
| Warner Music Group Corp.                   | WMG    | Equity          |
| Advanced Drainage Systems, Inc.            | WMS    | Equity          |
| WAL-MART INC.                              | WMT    | Equity          |
| WABASH NATIONAL CORP.                      | WNC    | Equity          |
| WNS Holdings Ltd                           | WNS    | Equity          |
| Wolfspeed, Inc.                            | WOLF   | Equity          |

| MIAX Options Securities as of 6/17/22       |        |                 |
|---|--------|-----------------|
| Company Name                                | Symbol | Instrument Type |
| PETCO HEALTH AND WELLNESS COMPANY, INC.     | WOOF   | Equity          |
| WORTHINGTON INDUSTRIES, INC.                | WOR    | Equity          |
| WideOpenWest, Inc.                          | WOW    | Equity          |
| W.P. Carey Inc.                             | WPC    | Equity          |
| Wheaton Precious Metals Corporation         | WPM    | Equity          |
| WPP plc                                     | WPP    | Equity          |
| WESTPORT INNOVATIONS INC.                   | WPRT   | Equity          |
| Wrap Technologies, Inc.                     | WRAP   | Equity          |
| BERKLEY(WR) CORP                            | WRB    | Equity          |
| WARBY PARKER, INC.                          | WRBY   | Equity          |
| Washington Real Estate Investment Trust     | WRE    | Equity          |
| WestRock Company                            | WRK    | Equity          |
| WORLD ACCEPTANCE CORPORATION                | WRLD   | Equity          |
| Waterstone Financial, Inc.                  | WSBF   | Equity          |
| WillScot Corporation                        | WSC    | Equity          |
| WILLIAMS-SONOMA INC                         | WSM    | Equity          |
| Whitestone REIT                             | WSR    | Equity          |
| West Pharmaceutical Services Inc            | WST    | Equity          |
| Wintrust Financial Corporation              | WTFC   | Equity          |
| W&T OFFSHORE INC                            | WTI    | Equity          |
| Essential Utilities, Inc.                   | WTRG   | Equity          |
| Waitr Holdings Inc.                         | WTRH   | Equity          |
| Select Energy Services, Inc.                | WTTR   | Equity          |
| Willis Towers Watson Public Limited Company | WTW    | Equity          |
| THE WESTERN UNION COMPANY                   | WU     | Equity          |
| WAVE Life Sciences Ltd                      | WVE    | Equity          |
| Weight Watchers International, Inc.         | WW     | Equity          |
| Woodward, Inc.                              | WWD    | Equity          |
| World Wrestling Entertainment Inc           | WWE    | Equity          |
| WESTWATER RESOURCES INC                     | WWR    | Equity          |
| WOLVERINE WORLD WIDE INC                    | WWW    | Equity          |
| WEYERHAEUSER COMPANY                        | WY     | Equity          |
| WYNN RESORTS LTD.                           | WYNN   | Equity          |
| WIDEPOINT CORPORATION                       | WYY    | Equity          |
| UNITED STATES STEEL CORPORATION             | X      | Equity          |
| BEYOND AIR INC                              | XAIR   | Equity          |
| SPDR S&P Biotech ETF                        | XBI    | ETF             |
| XBiotech, Inc.                              | XBIT   | Equity          |
| XCEL ENERGY INC                             | XEL    | Equity          |
| EXELA TECHNOLOGIES INC                      | XELA   | Equity          |
| Xenon Pharmaceuticals Inc.                  | XENE   | Equity          |
| Xeris Biopharma Holdings, Inc.              | XERS   | Equity          |
| SPDR S&P Oil & Gas Equipment & Svcs ETF     | XES    | ETF             |
| X4 PHARMACEUTICALS, INC.                    | XFOR   | Equity          |
| EXAGEN, INC.                                | XGN    | Equity          |

| MIAX Options Securities as of 6/17/22       |        |                 |
|---|--------|-----------------|
| Company Name                                | Symbol | Instrument Type |
| SPDR S&P HOMEBUILDERS                       | XHB    | ETF             |
| Xenia Hotels & Resorts, Inc.                | XHR    | Equity          |
| Xinyuan Real Estate Company LTD             | XIN    | Equity          |
| XL Fleet Corporation                        | XL     | Equity          |
| MATERIALS SELECT SECTOR SPDR                | XLB    | ETF             |
| Communication Services Select Sect SPDR ETF | XLC    | ETF             |
| ENERGY SELECT SECTOR SPDR                   | XLE    | ETF             |
| FINANCIAL SELECT SECTOR SPDR                | XLF    | ETF             |
| INDUSTRIAL SELECT SECTOR SPDR               | XLI    | ETF             |
| TECHNOLOGY SELECT SECTOR SPDR               | XLK    | ETF             |
| CONSUMER STAPLES SELECT SECTOR SPDR         | XLP    | ETF             |
| Real Estate Select Sector SPDR              | XLRE   | ETF             |
| UTILITIES SELECT SECTOR SPDR                | XLU    | ETF             |
| HEALTH CARE SELECT SECTOR SPDR              | XLV    | ETF             |
| CONSUMER DISCRETIONARY SELECT SPDR          | XLY    | ETF             |
| QUALTRICS INTERNATIONAL                     | XM     | Equity          |
| SPDR S&P METALS & MINING                    | XME    | ETF             |
| XOMETRY INC.                                | XMTR   | Equity          |
| Xencor, Inc.                                | XNCR   | Equity          |
| Xunlei Limited                              | XNET   | Equity          |
| EXXON MOBIL CORPORATION                     | XOM    | Equity          |
| XOMA CORPORATION                            | XOMA   | Equity          |
| SPDR S&P OIL & GAS EXPLORATION & PROD       | XOP    | ETF             |
| Xos, Inc.                                   | XOS    | Equity          |
| XP Inc.                                     | XP     | Equity          |
| XPEL, INC.                                  | XPEL   | Equity          |
| Xperi Holding Corporation                   | XPER   | Equity          |
| XPENG, INC. ADR CLASS A                     | XPEV   | Equity          |
| XPO Logistics, Inc.                         | XPO    | Equity          |
| DPCM CAPITAL, INC.                          | XPOA   | Equity          |
| XPONENTIAL FITNESS, INC                     | XPOF   | Equity          |
| ProShares Ultra FTSE China 50               | XPP    | ETF             |
| DENTSPLY INTL, INC.                         | XRAY   | Equity          |
| SPDR S&P RETAIL                             | XRT    | ETF             |
| XEROX CORPORATION                           | XRX    | Equity          |
| SPDR S&P Semiconductor ETF                  | XSD    | ETF             |
| XpresSpa Group, Inc.                        | XSPA   | Equity          |
| 22ND CENTURY GROUP, INC.                    | XXII   | Equity          |
| Xylem Inc.                                  | XYL    | Equity          |
| Alleghany Corporation                       | Y      | Equity          |
| YALLA GROUP LIMITED                         | YALA   | Equity          |
| Direxion Daily FTSE China Bear 3x Shares    | YANG   | ETF             |
| CBDMD, INC.                                 | YCBD   | Equity          |
| ProShares UltraShort Yen                    | YCS    | ETF             |
| Yellow Corporation                          | YELL   | Equity          |



| MIAX Options Securities as of 6/17/22   |        |                 |
|---|--------|-----------------|
| Company Name                            | Symbol | Instrument Type |
| YELP, INC.                              | YELP   | Equity          |
| YETI Holdings, Inc.                     | YETI   | Equity          |
| Yext, Inc.                              | YEXT   | Equity          |
| Direxion Daily China 3X Bull Shares     | YINN   | ETF             |
| Y-MABS THERAPEUTICS INC                 | YMAB   | Equity          |
| FULL TRUCK ALLIANCE CO. LTD.            | YMM    | Equity          |
| ADVISORSHARES PURE CANNABIS ETF         | YOLO   | ETF             |
| CLEAR SECURE, INC                       | YOU    | Equity          |
| YPF S.A.                                | YPF    | Equity          |
| Yirendai Ltd.                           | YRD    | Equity          |
| YATSEN HOLDING LTD                      | YSG    | Equity          |
| YUM! BRANDS, INC.                       | YUM    | Equity          |
| Yum China Holdings, Inc.                | YUMC   | Equity          |
| LIQUID MEDIA GROUP LTD.                 | YVR    | Equity          |
| YY INC.                                 | YY     | Equity          |
| ZILLOW GROUP, INC.                      | Z      | Equity          |
| Zimmer Bionet Holdings, Inc.            | ZBH    | Equity          |
| ZEBRA TECHNOLOGIES CORP.                | ZBRA   | Equity          |
| Ziff Davis, Inc.                        | ZD     | Equity          |
| ZEDGE INC                               | ZDGE   | Equity          |
| ZENDESK, INC.                           | ZEN    | Equity          |
| Zepp Health Corporation                 | ZEPP   | Equity          |
| ECOARK HOLDINGS, INC.                   | ZEST   | Equity          |
| ZETA GLOBAL HOLDINGS CORP.              | ZETA   | Equity          |
| OLYMPIC STEEL INC.                      | ZEUS   | Equity          |
| Lightning eMotors, Inc                  | ZEV    | Equity          |
| Zillow Group, Inc                       | ZG     | Equity          |
| ZHIHU INC                               | ZH     | Equity          |
| ZOOMINFO TECHNOLOGIES INC.              | ZI     | Equity          |
| ZIM INTEGRATED SHIPPING SERVICE         | ZIM    | Equity          |
| ZIONS BANCORP                           | ZION   | Equity          |
| ZIPRECRUITER, INC                       | ZIP    | Equity          |
| ZK INTERNATIONAL GROUP CO., LTD.        | ZKIN   | Equity          |
| ZAI LAB LTD                             | ZLAB   | Equity          |
| Zoom Video Communications. Inc.         | ZM     | Equity          |
| China Southern Airlines Co. Ltd.        | ZNH    | Equity          |
| ZENTALIS PHARMACEUTICALS, INC.          | ZNTL   | Equity          |
| Zscaler, Inc.                           | ZS     | Equity          |
| ProShares UltraShort Silver (20 shares) | ZSL    | ETF             |
| ZTO Express (Cayman) Inc.               | ZTO    | Equity          |
| ZOETIS INC.                             | ZTS    | Equity          |
| ZUMIEZ INC                              | ZUMZ   | Equity          |
| Zuora, Inc.                             | ZUO    | Equity          |
| Zovio Inc.                              | ZVO    | Equity          |
| Zurn Water Solutions Corporation        | ZWS    | Equity          |

| <b>MIAX Options Securities as of 6/17/22</b> |               |                        |
|--|---------------|------------------------|
| <b>Company Name</b>                          | <b>Symbol</b> | <b>Instrument Type</b> |
| ZYMERGEN INC                                 | ZY            | Equity                 |
| Zymeworks Inc                                | ZYME          | Equity                 |
| Zynerba Pharmaceuticals, Inc.                | ZYNE          | Equity                 |
| Zynex, Inc.                                  | ZYXI          | Equity                 |