



June 25, 2025

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

**RE: MIAX Emerald, LLC ("EMERALD")  
Amendment 2025-13 to Form 1 Application**

Dear Sir/Madam:

Enclosed for official filing pursuant to Rule 6a-2(b) is Amendment 2025-13 to the Form 1 Application of EMERALD, 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,

A handwritten signature in black ink that reads "Barbara J. Comly". The signature is written in a cursive, flowing style.

Barbara J. Comly  
EVP, General Counsel & Corporate Secretary

Enclosure  
cc: Marlene Olsen

|                                       |  |   |                         |
|---------------------------------------|--|---|-------------------------|
| 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>06/25/25 | 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: MIAX Emerald, LLC
2. Provide the applicant's primary street address: 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



25000253

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

6. Provide the name and address of counsel for the applicant:  
Barbara J. Comly, EVP, General Counsel & Corporate Secretary  
MIAX Emerald, LLC  
7 Roszel Road, Suite 1A  
Princeton, NJ 08540

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

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

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

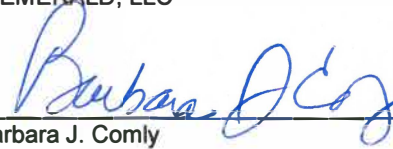
(a) Date (MM/DD/YY): 01/30/18                      (b) State/Country of formation: Delaware

(c) Statute under which applicant was organized: Delaware Limited Liability Company Act (6 Del. C. § 18-101, et seq.)

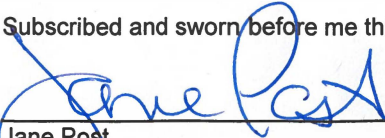
**EXECUTION:** The applicant consents that service of any civil action brought by, or notice of any proceeding before, the Securities and Exchange Commission in connection with the applicant's activities may be given by registered or certified mail or confirmed telegram to the applicant's contact employee 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.

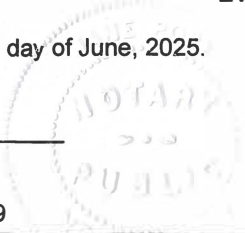
MIAX EMERALD, LLC

Date: June 18, 2025

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

Subscribed and sworn before me this 18<sup>th</sup> day of June, 2025.

  
Jane Post  
Notary Public of the State of New Jersey  
My Commission Expires October 27, 2029



**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, 2024 are attached.
2. Audited unconsolidated financial statements of Miami International Securities Exchange, LLC as of December 31, 2024 are attached.
3. Audited unconsolidated financial statements of MIAX PEARL, LLC as of December 31, 2024 are attached.
4. Audited unconsolidated financial statements of MIAX Sapphire, LLC as of December 31, 2024 are attached.
5. Unaudited unconsolidated financial statements of Miami International Technologies, LLC as of December 31, 2024 are attached.
6. Unaudited unconsolidated financial statements of MIAX Global Derivatives, LLC as of December 31, 2024 are attached. (Balance sheet provided; no profit & loss statement as no income or expenses as of December 31, 2024.)
7. Unaudited unconsolidated financial statements of M 9 Holdings, LLC as of December 31, 2024 are attached.
8. Unaudited unconsolidated financial statements of The Bermuda Stock Exchange as of December 31, 2024 are attached.
9. Unaudited unconsolidated financial statements of M 402 Holdings, LLC as of December 31, 2024 are attached.
10. Unaudited unconsolidated financial statements of MIAX Futures Exchange, LLC as of December 31, 2024 are attached.
11. Unaudited unconsolidated financial statements of MGEX Real Estate Holdings, LLC as of December 31, 2024 are attached.

12. Unaudited unconsolidated financial statements of Dorman Trading, LLC as of December 31, 2024 are attached.
13. Unaudited unconsolidated financial statements of M 7 Holdings, LLC as of December 31, 2024 are attached. (Balance sheet provided; no profit & loss statement as no income or expenses as of December 31, 2024.)
14. Unaudited unconsolidated financial statements of LedgerX LLC d/b/a MIAX Derivatives Exchange as of December 31, 2024 are attached.
15. Unaudited unconsolidated financial statements MIH East Holdings, Limited as of December 31, 2024.
16. Unaudited unconsolidated financial statements of ConvexityShares, LLC as of December 31, 2024 are attached.
17. 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 MIAX Emerald, LLC as of December 31, 2024 are attached. MIAX Emerald, 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 MIAX Emerald, LLC. Miami International Holdings, Inc. exercises "control" over the Exchange, as that term is defined in the Form 1 instructions. MIAX Emerald, LLC became a wholly-owned subsidiary of Miami International Holdings, Inc. on January 30, 2018.

## **EXHIBIT M**

### **Exhibit Request:**

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

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

### **Response:**

Attached is a list of the members of the Exchange as of June 3, 2025, 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 2, 2025, 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, 2024

**Miami International Holdings, Inc.**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2024 (dollars in thousands)**

---

**Assets**

|  |    |                       |
|--|----|-----------------------|
| Current assets:                                    |    |                       |
| Cash and cash equivalents                          | \$ | 65,220                |
| Other current assets                               |    | <u>10,962</u>         |
| Total current assets                               |    | 76,182                |
| Due from Miami International Holdings, Inc.        |    | 188,595               |
| Investment in third parties                        |    | 12,600                |
| Investment in subsidiaries                         |    | 91,192                |
| Fixed assets, net of depreciation and amortization |    | 32,207                |
| Internally developed software, net of amortization |    | 32,262                |
| Goodwill   |    | 46,818                |
| Other intangible assets, net                       |    | 114,224               |
| Other assets                                       |    | <u>21,617</u>         |
| Total assets                                       | \$ | <u><u>615,697</u></u> |

**Liabilities and stockholders' equity**

|   |    |                       |
|---|----|-----------------------|
| Current liabilities:                          |    |                       |
| Accounts payable and other liabilities        | \$ | 36,238                |
| Accrued compensation payable                  |    | 29,902                |
| Current portion of long-term debt             |    | <u>4,767</u>          |
| Total current liabilities                     |    | 70,907                |
| Deferred income taxes                         |    | 10,766                |
| Long-term debt                                |    | 32,268                |
| Puttable common stock, net of current portion |    | 78,424                |
| Puttable warrants issued with debt            |    | 64,188                |
| Other non-current liabilities                 |    | <u>14,527</u>         |
| Total liabilities                             |    | 271,080               |
| Stockholders' equity:                         |    |                       |
| Convertible preferred stock                   |    | 2                     |
| Common stock                                  |    | 126                   |
| Common stock in treasury                      |    | (775)                 |
| Additional paid-in capital                    |    | 930,574               |
| Accumulated deficit                           |    | <u>(585,310)</u>      |
| Total stockholders' equity                    |    | 344,617               |
| Total stockholders' equity                    |    | <u>344,617</u>        |
| Total liabilities and stockholders' equity    | \$ | <u><u>615,697</u></u> |

**Miami International Holdings, Inc.**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

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|  |                    |
|--|--------------------|
| Revenues:  |                    |
| Other revenue  | \$ <u>20,582</u>   |
| Total revenues   | 20,582             |
| Operating expenses:                                      |                    |
| Compensation and benefits                                | 26,641             |
| Information technology and communication costs           | 10,101             |
| Depreciation and amortization                            | 21,630             |
| Occupancy costs  | 1,583              |
| Professional fees and outside services                   | 18,819             |
| Marketing and business development                       | 2,002              |
| General, administrative, and other                       | <u>6,535</u>       |
| Total operating expenses                                 | 87,311             |
| Operating loss   | (66,729)           |
| Non-operating income (expense):                          |                    |
| Change in fair value of puttable common stock            | (10,594)           |
| Change in FV of puttable warrants issued with debt       | (4,662)            |
| Interest income  | 1,093              |
| Interest expense and amortization of debt issuance costs | (13,778)           |
| Impairment of investment                                 | (4,108)            |
| Intercompany dividends                                   | 51,895             |
| Other, net   | <u>(1,515)</u>     |
| Loss before income tax provision                         | (48,398)           |
| Income tax expense                                       | <u>(4,883)</u>     |
| Net loss   | (53,281)           |
| Net loss attributable to non-controlling interest        | <u>(137)</u>       |
| Net loss attributable to common stock holders            | <u>\$ (53,144)</u> |

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**

Financial Statements

As of and for the year ended December 31, 2024

(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

To the Member and Board of Directors of  
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, 2024, and the related statements of income and changes in member's deficit/equity, 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, 2024, 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 12, 2025

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statement of Financial Condition**  
**December 31, 2024 (dollars in thousands)**

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| <b>Assets</b>                               |           |
|---|-----------|
| Current assets:                             |           |
| Cash and cash equivalents                   | \$ 6,150  |
| Accounts receivable                         | 23,932    |
| Marketing fee receivable                    | 8,129     |
| Other current assets                        | 381       |
| Total current assets                        | 38,592    |
| Notes receivable, net                       | 16,225    |
| Due from Miami International Holdings, Inc. | 36,728    |
| Other assets                                | 1,000     |
| Total assets                                | \$ 92,545 |
| <b>Liabilities and Member's Equity</b>      |           |
| Current liabilities:                        |           |
| Accounts payable and other liabilities      | \$ 15,277 |
| Marketing fees payable                      | 8,173     |
| Deferred transaction revenue                | 50        |
| Total current liabilities                   | 23,500    |
| Commitments and contingencies (Note 6)      |           |
| Member's equity                             | 69,045    |
| Total liabilities and member's equity       | \$ 92,545 |

*See accompanying notes to financial statements.*

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statement of Income and Changes in Member's Deficit/Equity**  
**Year Ended December 31, 2024 (dollars in thousands)**

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|  |                         |
|--|-------------------------|
| Revenues:                                      |                         |
| Transaction fees                               | \$ 189,846              |
| Access fees                                    | 26,923                  |
| Market data fees                               | 8,576                   |
| Other revenue                                  | 73                      |
| Total revenues                                 | <u>225,418</u>          |
| Cost of revenues:                              |                         |
| Liquidity payments                             | 100,983                 |
| Brokerage and exchange fees                    | 1,957                   |
| Section 31 fees                                | 14,740                  |
| Total cost of revenues                         | <u>117,680</u>          |
| Revenues less cost of revenues                 | <u>107,738</u>          |
| Operating expenses:                            |                         |
| Compensation and benefits                      | 15,611                  |
| Information technology and communication costs | 6,788                   |
| Occupancy costs                                | 570                     |
| Professional fees and outside services         | 6,818                   |
| Marketing and business development             | 645                     |
| General, administrative, and other             | 2,274                   |
| Total operating expenses                       | <u>32,706</u>           |
| Operating income                               | 75,032                  |
| Non-operating income:                          |                         |
| Interest income                                | 417                     |
| Net income                                     | <u>\$ 75,449</u>        |
| Member's deficit at beginning of year          | \$ (6,404)              |
| Net income                                     | <u>75,449</u>           |
| Member's equity at end of year                 | <u><u>\$ 69,045</u></u> |

*See accompanying notes to financial statements.*

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statement of Cash Flows**  
**Year Ended December 31, 2024 (dollars in thousands)**

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|   |                 |
|---|-----------------|
| Cash flow from operating activities:  |                 |
| Net income  | \$ 75,449       |
| Adjustments to reconcile net income to net cash provided by operating activities: |                 |
| Provision for notes receivable credit losses                                      | 924             |
| Changes in operating assets and liabilities:                                      |                 |
| Accounts receivable   | (9,673)         |
| Marketing fees receivable   | (2,534)         |
| Notes receivable  | (2,486)         |
| Other current assets  | 1,009           |
| Accounts payable and other liabilities  | 6,792           |
| Marketing fees payable  | 2,545           |
| Deferred transaction revenue  | 7               |
| Net cash provided by operating activities   | <u>72,033</u>   |
| Cash flow from financing activities:  |                 |
| Due from/to Miami International Holdings, Inc.                                    | <u>(70,487)</u> |
| Net cash used in financing activities   | <u>(70,487)</u> |
| Increase in cash and cash equivalents   | 1,546           |
| Cash and cash equivalents at beginning of year                                    | <u>4,604</u>    |
| Cash and cash equivalents at end of year  | <u>\$ 6,150</u> |
| Supplemental disclosure of cash flow information:                                 |                 |
| Cash paid for taxes   | \$ -            |
| Cash paid for interest  | \$ -            |

*See accompanying notes to financial statements.*

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

As of and for the Year Ended December 31, 2024

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### 1. NATURE OF OPERATIONS

Miami International Securities Exchange, LLC (“MIAX Options” 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 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.

#### *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, 2024.

#### *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 using an aging schedule. The aging schedule applies loss rates based on historical loss information and as deemed necessary, is adjusted for the difference in the nature of the receivables that exist at the reporting date from the historical period. 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 the short-term nature of the accounts receivable, changes in future economic conditions are not expected to have a significant impact on the expected credit losses.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

As of and for the Year Ended December 31, 2024

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

The Parent or the Parent's other wholly owned subsidiaries may incur certain expenditures on behalf of the Company or receive cash from the Company generated from its operations. Expenses incurred and cash provided 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 either due to or due from Miami International Holdings, Inc. on the statement of financial condition. 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 MIAX Emerald, LLC ("MIAX Emerald"), MIAX Pearl, LLC ("MIAX Pearl") and MIAX Sapphire, LLC ("MIAX Sapphire"). The Company's allocated portion of cost is included in the accompanying statement of income and member's deficit/equity. The Company considers changes in Due from/to Miami International Holdings, Inc., to be financing activity for purposes of the statement 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 is 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 fees:* Transaction fees represent fees the Company charges to its exchange member firms, as customers, for the performance obligation of executing a trade on the Company's exchange. These fees can be variable based on trade volume tiered discounts; however, as all tiered discounts are calculated monthly, the actual discount is recorded on a monthly basis in accordance with the Company's published fee schedules. Transaction fees are recorded as transactions occur on a trade-date basis.

Tiered discounts are offered to customers based on the amount of trades that are executed on the Company's exchange. As these are volume driven, they reduce the transaction price and are recorded net in transaction fees on the statement of income and changes in member's deficit/equity. Liquidity payments paid for certain customer transactions are accounted for as consideration payable to a customer and are recorded separately as liquidity payments, which are classified within cost of revenues in the statement of income and changes in member's deficit/equity.

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

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

As of and for the Year Ended December 31, 2024

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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 statement of income and changes in member's deficit/equity.

*Access fees:* Access fees include fees assessed for allowing customers, which include exchange member firms and non-member firms, to connect their networks to the Company's exchange or to an external exchange for a specified period of time. Fees for these services are assessed to customers for the opportunity to trade as member firms, or in the case of non-member firms to provide these services to member firms, and use other related functions of the exchange. Access fees are billed monthly in accordance with the published fee schedules 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 the Options Price Reporting Authority ("OPRA") tape plan. Market data revenue includes distributions from OPRA, 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 fees section above, liquidity payments 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 payment is provided.

*Concentration of revenue:* For the year ended December 31, 2024, three customers generated 47% of the Company's total revenue. No customer is contractually or otherwise obligated to continue to use the Company's services. The loss of, or a significant reduction of, participation by these customers may have a material adverse effect on the Company's business, financial position, results of operations and cash flows.

*Deferred transaction revenue:* Deferred transaction revenue consists of prepaid transaction and non-transaction fees which are recognized as revenue when earned.

### ***Income Taxes***

The Company is a disregarded LLC for U.S. income tax. 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. Accordingly, no provision for income taxes is provided in the accompanying financial statements.

### ***Segment Information***

The Company is engaged in a single line of business operating an options exchange in the United States which is a national securities exchange regulated by the SEC. The Company has identified its Chief Executive Officer as the chief operating decision maker ("CODM"). The CODM primarily uses net revenues (revenues less cost of revenues) and operating income included in the statement of income and changes in member's deficit/equity to evaluate the results of the business and manage the Company. The Company's operations constitute a single operating segment and therefore, a single reportable segment, because the CODM manages the business activities using information of the Company as a whole. The significant expenses of the segment are reported on the statement of income and changes in member's deficit/equity. The accounting policies used to measure the financial results of the segment are the same as the significant accounting policies described herein.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

As of and for the Year Ended December 31, 2024

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### *Recent Accounting Pronouncements*

#### Recent Accounting Pronouncements – Adopted

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which updates reportable segment disclosure requirements primarily through enhanced disclosures about significant segment expenses. The amendments are effective for fiscal years beginning after December 15, 2023, and for interim periods within fiscal years beginning after December 15, 2024. The Company retrospectively adopted the ASU for the period ended December 31, 2024. The adoption of the standard did not have any material impact on the Company's financial statements.

#### Recent Accounting Pronouncements - Not yet Adopted

In November 2024, the FASB issued ASU 2024-03, Income Statement—Reporting Comprehensive Income—Expense Disaggregation Disclosures. ASU 2024-03 amends ASC 220, Comprehensive Income to expand income statement expense disclosures and require disclosure in the notes to the financial statements of specified information about certain costs and expenses. ASU 2024-03 is required to be adopted for fiscal years commencing after December 15, 2026 with early adoption permitted. The Company expects to adopt the update for the annual financial statements issued for the year ending December 31, 2027 and is currently evaluating the impact of adopting the standard on the financial statements.

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

The notes receivable relates 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 and operation of the CAT was provided by the Self-Regulatory Organizations (“SROs”), which include the Company's exchange and by broker-dealers in exchange for promissory notes, a portion of which were expected to be repaid by Consolidated Audit Trail, LLC (“CAT LLC”).

On September 6, 2023, the SEC issued an order approving a revised CAT funding model calculated based on the share of transactions executed. The funding model consists of two categories: (i) CAT fees assessed to executing brokers to recover a portion of historical CAT costs previously paid by the SROs; and (ii) CAT fees assessed to executing brokers and SROs to fund prospective CAT costs (the “prospective fee”). During the first week of January 2024, the SROs submitted fee filings with the SEC to implement the applicable transaction-based fee rates that are to be assessed to executing brokers to recover a portion of historical CAT costs incurred prior to 2022 and use the collected funds to repay a portion of the promissory notes to the SROs. On January 17, 2024, the SEC issued orders suspending each SRO's fee filing and instituting proceedings to determine whether to approve or disapprove the fees, as published in the Federal Register on February 13, 2024.

In August 2024, the SROs submitted fee filings again with the SEC to implement fees to recover a portion of historical CAT costs incurred prior to 2022. Effective October 1, 2024, CAT LLC began collecting fees from executing brokers on behalf of the SROs and from December 2024, has started remitting funds collected from the industry members to the SROs to pay back the promissory notes issued prior to January 1, 2022. Additional historical fees to recover historical cost incurred between January 1, 2022 and July 15, 2024 are planned to be introduced at a later time through separate fee filings submitted by the SROs.

The SROs submitted another fee filing in August 2024 with the SEC to implement the applicable transaction-based fee rates which are predetermined by CAT LLC to cover a portion of prospective CAT costs, effective as of September 3, 2024. The prospective fee will continue to fund CAT LLC's operations. In November 2024, CAT LLC started invoicing the SROs and the executing brokers for their respective portion of the prospective fee. The Company does not expect to issue additional promissory notes to fund CAT as CAT LLC has begun collecting the prospective fees.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

As of and for the Year Ended December 31, 2024

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On October 17, 2023, certain parties filed a legal challenge in court against the SEC's order above. On April 16, 2024, a putative class action was filed alleging, that the SEC engaged in unlawful agency action and violated multiple provisions of the U.S. Constitution when mandating the creation and funding of the CAT. These challenges or any other litigation related to the CAT funding model may significantly delay its implementation. As a result, SROs may continue to incur additional CAT costs and/or it may result in SROs not being able to collect on the promissory notes related to the CAT funding.

The following table presents the change in the notes receivable, net of allowance for the notes receivable as of December 31, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Balance at January 1, 2024                       | \$ | 14,663        |
| Notes issued, net of allowance for credit losses |    | 1,848         |
| Repayments                                       |    | (286)         |
| Balance at December 31, 2024                     | \$ | <u>16,225</u> |

The allowance for notes receivable associated with CAT is calculated primarily based on the structure of the notes and potential outcomes under the CAT funding model.

The following represents the change in allowance for notes receivable for the year ended December 31, 2024 (in thousands):

|                                      |    |              |
|--------------------------------------|----|--------------|
| Balance at January 1, 2024           | \$ | 7,356        |
| Provision for uncollectible amount   |    | 924          |
| Write-offs charged against allowance |    | -            |
| Recoveries collected                 |    | -            |
| Balance at December 31, 2024         | \$ | <u>8,280</u> |

#### 4. ACCOUNTS PAYABLE AND OTHER LIABILITIES

The following table presents the components of accounts payable and other liabilities as at December 31, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Liquidity payments payable             | \$ | 6,168         |
| Section 31 fees payable                |    | 6,692         |
| Accounts payable and other             |    | 2,417         |
| Accounts payable and other liabilities | \$ | <u>15,277</u> |

#### 5. RELATED PARTY TRANSACTIONS

The Company 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.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

As of and for the Year Ended December 31, 2024

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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, 2024 (in thousands):

|  |    |        |
|--|----|--------|
| Compensation and benefits                      | \$ | 15,611 |
| Information technology and communication costs |    | 6,788  |
| Occupancy costs                                |    | 570    |
| Professional fees and outside services         |    | 4,591  |
| Marketing and business development             |    | 645    |
| General, administrative, and other             |    | 507    |
| Total operating expenses                       | \$ | 28,712 |

## 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, MIAAX 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 was 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 June 7, 2022, the USPTO Director denied Nasdaq's request for review of the PTAB Final Written Decisions.

On August 31, 2021, MIH filed an Answer and Counterclaims in the NJ District Court (the "MIH's Answer"). MIH's Answer included denials of the allegations made by Nasdaq in the Complaint and Counterclaims by MIH 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. 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. MIH filed an Amended Answer and Counterclaims on August 5, 2022. The Amended Counterclaims added claims of fraud on the patent office and Lanham Act violations. On July 25, 2023, the Court denied a motion by MIH to dismiss Nasdaq's trade secret claims and also denied a motion by Nasdaq to dismiss MIH's counterclaims. The Court granted Nasdaq's motion to stay and bifurcate MIH's counterclaims. Accordingly, the trade secret case is currently proceeding and MIH's counterclaims are stayed until the conclusion of the trade secret case at which time the parties may proceed to litigate MIH's counterclaims against Nasdaq. The parties each filed a motion for summary judgment and motions to exclude certain experts. We anticipate the Court will decide the motions in the second half of 2025. MIH intends to continue defending 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 condition, the statement of income and changes in member's deficit/equity or cash flows of the Company.

# **MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**

## **Notes to Financial Statements**

**As of and for the Year Ended December 31, 2024**

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

### **7. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company's financial statements through June 12, 2025, 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 PEARL, LLC**

Financial Statements

As of and for the year ended December 31, 2024

(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

To the Member and Board of Directors of  
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, 2024, and the related statements of operations 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, 2024, 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 12, 2025

**MIAX PEARL, LLC**  
**Statement of Financial Condition**  
**December 31, 2024 (dollars in thousands)**

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| <b>Assets</b>             |           |
|---------------------------|-----------|
| Current assets:           |           |
| Cash and cash equivalents | \$ 17,660 |
| Accounts receivable       | 25,865    |
| Other current assets      | 258       |
| Total current assets      | 43,783    |
| Notes receivable, net     | 24,047    |
| Other assets              | 1,000     |
| Total assets              | \$ 68,830 |

**Liabilities and Member's Deficit**

|   |           |
|---|-----------|
| Current liabilities:                      |           |
| Accounts payable and other liabilities    | \$ 29,132 |
| Deferred transaction revenue              | 86        |
| Total current liabilities                 | 29,218    |
| Due to Miami International Holdings, Inc. | 118,314   |
| Total liabilities                         | 147,532   |
| Commitments and contingencies (Note 6)    |           |
| Member's deficit                          | (78,702)  |
| Total liabilities and member's deficit    | \$ 68,830 |

*See accompanying notes to financial statements.*

**MIAX PEARL, LLC**  
**Statement of Operations and Changes in Member's Deficit**  
**Year Ended December 31, 2024 (dollars in thousands)**

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|  |                    |
|--|--------------------|
| Revenues:                                      |                    |
| Transaction fees                               | \$ 435,431         |
| Access fees                                    | 33,282             |
| Market data fees                               | 14,682             |
| Other revenue                                  | 56                 |
| Total revenues                                 | <u>483,451</u>     |
| Cost of revenues:                              |                    |
| Liquidity payments                             | 377,604            |
| Brokerage and exchange fees                    | 1,786              |
| Section 31 fees                                | 35,833             |
| Equity rights programs                         | 1,975              |
| Total cost of revenues                         | <u>417,198</u>     |
| Revenues less cost of revenues                 | 66,253             |
| Operating expenses:                            |                    |
| Compensation and benefits                      | 29,344             |
| Information technology and communication costs | 17,869             |
| Occupancy costs                                | 1,269              |
| Professional fees and outside services         | 8,976              |
| Marketing and business development             | 51                 |
| General, administrative, and other             | 2,573              |
| Total operating expenses                       | <u>60,082</u>      |
| Operating income                               | 6,171              |
| Non-operating income:                          |                    |
| Interest income                                | 565                |
| Net income                                     | <u>\$ 6,736</u>    |
| Member's deficit at beginning of year          | \$ (85,438)        |
| Net income                                     | 6,736              |
| Member's deficit at end of year                | <u>\$ (78,702)</u> |

*See accompanying notes to financial statements.*

**MIAX PEARL, LLC**  
**Statement of Cash Flows**  
**Year Ended December 31, 2024 (dollars in thousands)**

---

|   |                  |
|---|------------------|
| Cash flow from operating activities:  |                  |
| Net income  | \$ 6,736         |
| Adjustments to reconcile net income to net cash provided by operating activities: |                  |
| Provision for notes receivable credit losses                                      | 1,377            |
| Changes in operating assets and liabilities:                                      |                  |
| Accounts receivable   | (40)             |
| Notes receivable  | (3,781)          |
| Other assets  | (38)             |
| Accounts payable and other liabilities  | 6,238            |
| Deferred transaction revenue  | 3                |
| Net cash provided by operating activities   | <u>10,495</u>    |
| Cash flow from financing activities:  |                  |
| Due to Miami International Holdings, Inc.   | <u>(2,606)</u>   |
| Net cash used in financing activities   | <u>(2,606)</u>   |
| Increase in cash and cash equivalents   | 7,889            |
| Cash and cash equivalents at beginning of year                                    | <u>9,771</u>     |
| Cash and cash equivalents at end of year  | <u>\$ 17,660</u> |
| Supplemental disclosure of cash flow information:                                 |                  |
| Cash paid for taxes   | \$ -             |
| Cash paid for interest  | \$ -             |

*See accompanying notes to financial statements.*

# MIAX PEARL, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2024

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#### 1. NATURE OF OPERATIONS

MIAX Pearl, LLC (“MIAX 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 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.

##### *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, 2024.

##### *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 using an aging schedule. The aging schedule applies loss rates based on historical loss information and as deemed necessary, is adjusted for the difference in the nature of the receivables that exist at the reporting date from the historical period. 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 the short-term nature of the accounts receivable, changes in future economic conditions are not expected to have a significant impact on the expected credit losses.

# MIAX PEARL, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2024

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#### *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 Options"), MIAX Emerald, LLC ("MIAX Emerald") and MIAX Sapphire, LLC ("MIAX Sapphire"). The Company's allocated portion of costs are included in the accompanying statement of operations and changes in member's deficit. The Company considers changes in Due to Miami International Holdings Inc., to be financing activity for purposes of the statement 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 is 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 fees:* Transaction fees represent fees the Company charges to its exchange member firms, as customers, for the performance obligation of executing a trade on the Company's exchange. These fees can be variable based on trade volume tiered discounts; however, as all tiered discounts are calculated monthly, the actual discount is recorded on a monthly basis in accordance with the Company's published fee schedules. Transaction fees are recorded as transactions occur on a trade-date basis.

In the event that a customer prepays for transaction fees, revenue is recognized as transactions occur. Tiered discounts are offered to customers based on the amount of trades that are executed on the Company's exchange. As these are volume driven, they reduce the transaction price and are recorded net in transaction fees on the statement of operations and changes in member's deficit. Liquidity payments paid for certain customer transactions are accounted for as consideration payable to a customer and are recorded separately as liquidity payments, which are classified within cost of revenue in the statement of operations and changes in member's deficit.

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

# MIAX PEARL, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2024

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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 operations 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 the U.S. Tape Plans, including the Options Price Reporting Authority ("OPRA"), the Unlisted Trading Privileges Plan ("UTP") and the Consolidated Tape Association Plan ("CTA"). 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, liquidity payments 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 Parent has issued warrants to certain 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 equity exchange which is considered a sales incentive offering that rewards customers solely in return for executing increased trading volumes with the Company.

*Concentration of revenue:* For the year ended December 31, 2024, three customers generated 39% of the Company's total revenue. No customer is contractually or otherwise obligated to continue to use the Company's services. The loss of, or a significant reduction of, participation by these customers may have a material adverse effect on the Company's business, financial position, results of operations and cash flows.

*Deferred transaction revenue:* Deferred transaction revenue consists of prepaid transaction and non-transaction fees which are recognized as revenue when earned.

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

The Company is a disregarded LLC for U.S. income tax. 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. Accordingly, no provision for income taxes is provided in the accompanying financial statements.

#### ***Segment Reporting***

The Company reports its results of operations through the following two business segments – Options and Equities. The following is a brief description of the primary business activities of the Company's two reportable operating segments:

Options – The Options segment includes listed options on the stocks of individual corporations ("equity options") and options on exchange-traded products ("ETPs"), such as exchange-traded funds ("ETFs"), which are "multi-listed" options and listed on a non-exclusive basis. These options trade on the Company's exchange, a U.S. national security exchange. The Options segment also includes applicable market data revenue generated from the consolidated tape plans, the licensing of proprietary options market data, and access services.

# MIAX PEARL, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2024

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Equities – The Equities segment includes listed US equities and ETP transaction services that occur on the Company’s exchange. The Equities segment also includes applicable market data revenue generated from the consolidated tape plans, the licensing of proprietary equities market data and access services.

The Company’s chief operating decision maker is its Chief Executive Officer who manages business operations, evaluates performance and allocates resources based on the segments net revenues (revenues less cost of revenues) and operating income. Revenues, cost of revenues and operating expenses are recorded specifically in the segment in which they are earned or to which they relate. The accounting policies used to measure the financial results of the segments are the same as the significant accounting policies described herein.

#### *Recent Accounting Pronouncements*

##### Recent Accounting Pronouncements – Adopted

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which updates reportable segment disclosure requirements primarily through enhanced disclosures about significant segment expenses. The amendments are effective for fiscal years beginning after December 15, 2023, and for interim periods within fiscal years beginning after December 15, 2024. The Company retrospectively adopted the ASU for the period ended December 31, 2024. The adoption of the standard did not have any material impact on the Company’s financial statements.

##### Recent Accounting Pronouncements - Not yet Adopted

In November 2024, the FASB issued ASU 2024-03, Income Statement—Reporting Comprehensive Income—Expense Disaggregation Disclosures. ASU 2024-03 amends ASC 220, Comprehensive Income to expand income statement expense disclosures and require disclosure in the notes to the financial statements of specified information about certain costs and expenses. ASU 2024-03 is required to be adopted for fiscal years commencing after December 15, 2026 with early adoption permitted. The Company expects to adopt the update for the annual financial statements issued for the year ending December 31, 2027 and is currently evaluating the impact of adopting the standard on the financial statements.

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

The notes receivable relates 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 and operation of the CAT was provided by the Self-Regulatory Organizations (“SROs”), which include the Company’s exchanges and by broker-dealers in exchange for promissory notes, a portion of which were expected to be repaid by Consolidated Audit Trail, LLC (“CAT LLC”).

On September 6, 2023, the SEC issued an order approving a revised CAT funding model calculated based on the share of transactions executed. The funding model consists of two categories: (i) CAT fees assessed to executing brokers to recover a portion of historical CAT costs previously paid by the SROs; and (ii) CAT fees assessed to executing brokers and SROs to fund prospective CAT costs (the “prospective fee”). During the first week of January 2024, the SROs submitted fee filings with the SEC to implement the applicable transaction-based fee rates that are to be assessed to executing brokers to recover a portion of historical CAT costs incurred prior to 2022 and use the collected funds to repay a portion of the promissory notes to the SROs. On January 17, 2024, the SEC issued orders suspending each SRO’s fee filing and instituting proceedings to determine whether to approve or disapprove the fees, as published in the Federal Register on February 13, 2024.

In August 2024, the SROs submitted fee filings again with the SEC to implement fees to recover a portion of historical CAT costs incurred prior to 2022. Effective October 1, 2024, CAT LLC began collecting fees from executing brokers on behalf of the SROs and from December 2024, has started remitting funds collected from the industry members to the SROs to pay back the promissory notes issued prior to January 1, 2022. Additional

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2024**

historical fees to recover historical cost incurred between January 1, 2022 and July 15, 2024 are planned to be introduced at a later time through separate fee filings submitted by the SROs.

The SROs submitted another fee filing in August 2024 with the SEC to implement the applicable transaction based fee rates which are predetermined by CAT LLC to cover a portion of prospective CAT costs, effective as of September 3, 2024. The prospective fee will continue to fund CAT LLC's operations. In November 2024, CAT LLC started invoicing the SROs and the executing brokers for their respective portion of the prospective fee. The Company does not expect to issue additional promissory notes to fund CAT as CAT LLC has begun collecting the prospective fees.

On October 17, 2023, certain parties filed a legal challenge in court against the SEC's order above. On April 16, 2024, a putative class action was filed alleging, that the SEC engaged in unlawful agency action and violated multiple provisions of the U.S. Constitution when mandating the creation and funding of the CAT. These challenges or any other litigation related to the CAT funding model may significantly delay its implementation. As a result, SROs may continue to incur additional CAT costs and/or it may result in SROs not being able to collect on the promissory notes related to the CAT funding.

The following table presents the change in the notes receivable, net of allowance for the notes receivable as of December 31, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Balance at January 1, 2024                       | \$ | 21,643        |
| Notes issued, net of allowance for credit losses |    | 2,755         |
| Repayments                                       |    | (351)         |
| Balance at December 31, 2024                     | \$ | <u>24,047</u> |

The allowance for notes receivable associated with CAT is calculated primarily based on the structure of the notes and potential outcomes under the CAT funding model.

The following represents the change in allowance for notes receivable for the year ended December 31, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Balance at January 1, 2024               | \$ | 10,839        |
| Provision for uncollectible amount       |    | 1,377         |
| Write-offs charged against the allowance |    | -             |
| Recoveries collected                     |    | -             |
| Balance at December 31, 2024             | \$ | <u>12,216</u> |

**4. ACCOUNTS PAYABLE AND OTHER LIABILITIES**

The following table presents the components of accounts payable and other liabilities as at December 31, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Liquidity payments payable             | \$ | 10,588        |
| Section 31 fees payable                |    | 15,291        |
| Accounts payable and other             |    | 3,253         |
| Accounts payable and other liabilities | \$ | <u>29,132</u> |

**5. RELATED PARTY TRANSACTIONS**

The Company 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, 2024

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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, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Compensation and benefits                      | \$ | 29,344        |
| Information technology and communication costs |    | 17,868        |
| Occupancy costs                                |    | 1,269         |
| Professional fees and outside services         |    | 5,723         |
| Marketing and business development             |    | 51            |
| General, administrative, and other             |    | 1,154         |
| Total operating expenses                       | \$ | <u>55,409</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 was 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 June 7, 2022, the USPTO Director denied Nasdaq's request for review of the PTAB Final Written Decisions.

On August 31, 2021, MIH filed an Answer and Counterclaims in the NJ District Court (the "MIH's Answer"). MIH's Answer included denials of the allegations made by Nasdaq in the Complaint and Counterclaims by MIH 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. 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. MIH filed an Amended Answer and Counterclaims on August 5, 2022. The Amended Counterclaims added claims of fraud on the patent office and Lanham Act violations. On July 25, 2023, the Court denied a motion by MIH to dismiss Nasdaq's trade secret claims and also denied a motion by Nasdaq to dismiss MIH's counterclaims. The Court granted Nasdaq's motion to stay and bifurcate MIH's counterclaims. Accordingly, the trade secret case is currently proceeding and MIH's counterclaims are stayed until the conclusion of the trade secret case at which time the parties may proceed to litigate MIH's counterclaims against Nasdaq. The parties each filed a motion for summary judgment and motions to exclude certain experts. We anticipate the Court will decide the motions in the second half of 2025. MIH intends to continue defending 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 condition, the statement of operations and changes in member's deficit 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, 2024**

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**7. EQUITY**

MIAX 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. MIAX Pearl has not made any distributions for the period from February 11, 2016 (inception) through December 31, 2024.

*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 Parent'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 meets the specific performance criteria, which require the participants to trade an agreed-upon number of equities contracts, subject to certain exceptions, on the Company's equity exchange on a daily basis over seven six-month measurement periods. In the event of an initial public offering of MIH common stock under the Securities Act of 1933, as amended, where the offering price, net of underwriting discounts and commissions, exceeds \$250,000,000 (a "Qualified Public Offering"), merger or other liquidating event, it will result in the immediate vesting of all unvested ERP V warrants that remain eligible to vest with the L-Unit participant. Upon closing, MIH collected \$22 million of prepaid fees from participating member firms which were fully amortized in 2022. The warrant vesting period ended on June 30, 2024 and no warrant expense was recognized thereafter.

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 operations 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 12, 2025, 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 SAPPHIRE, LLC**

Financial Statements

As of December 31, 2024 and for the period from April 6, 2023 (inception) to December 31, 2024

(with Independent Auditors' Report Thereon)

# MIAX SAPPHIRE, LLC

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

## Independent Auditors' Report

To the Member and Board of Directors of  
MIAX Sapphire, LLC:

### *Opinion*

We have audited the financial statements of MIAX Sapphire, LLC (the Company), which comprise the statement of financial condition as of December 31, 2024, and the related statements of operations and changes in member's deficit, and cash flows for the period from April 6, 2023 (inception) to December 31, 2024, 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, 2024, and the results of its operations and its cash flows for the period from April 6, 2023 (inception) to December 31, 2024 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 12, 2025

**MIAX SAPPHIRE, LLC**  
**Statement of Financial Condition**  
**December 31, 2024 (dollars in thousands)**

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|                           |  | <b>Assets</b> |                      |
|---------------------------|--|---------------|----------------------|
| Current assets:           |  |               |                      |
| Cash and cash equivalents |  | \$            | 5,359                |
| Accounts receivable       |  |               | 11,208               |
| Other current assets      |  |               | 213                  |
| Total current assets      |  |               | <u>16,780</u>        |
| Other assets              |  |               | <u>1,743</u>         |
| Total assets              |  | \$            | <u><u>18,523</u></u> |

**Liabilities and Member's Deficit**

|   |  |    |                      |
|---|--|----|----------------------|
| Current liabilities:                      |  |    |                      |
| Accounts payable and other liabilities    |  | \$ | 7,132                |
| Total current liabilities                 |  |    | <u>7,132</u>         |
| Due to Miami International Holdings, Inc. |  |    | <u>34,580</u>        |
| Total liabilities                         |  |    | 41,712               |
| Commitments and contingencies (Note 5)    |  |    |                      |
| Member's deficit                          |  |    | <u>(23,189)</u>      |
| Total liabilities and member's deficit    |  | \$ | <u><u>18,523</u></u> |

*See accompanying notes to financial statements.*

# MIAX SAPPHIRE, LLC

## Statement of Operations and Changes in Member's Deficit

For the period from April 6, 2023 (inception) to December 31, 2024 (dollars in thousands)

|   |    |                 |
|---|----|-----------------|
| Revenues:                                       |    |                 |
| Transaction fees                                | \$ | 39,004          |
| Access fees                                     |    | 710             |
| Market data fees                                |    | 468             |
| Total revenues                                  |    | <u>40,182</u>   |
| Cost of revenues:                               |    |                 |
| Liquidity payments                              |    | 24,018          |
| Brokerage and exchange fees                     |    | 371             |
| Section 31 fees                                 |    | 1,397           |
| Total cost of revenues                          |    | <u>25,786</u>   |
| Revenues less cost of revenues                  |    | 14,396          |
| Operating expenses:                             |    |                 |
| Compensation and benefits                       |    | 24,913          |
| Information technology and communication costs  |    | 5,665           |
| Occupancy costs                                 |    | 3,149           |
| Professional fees and outside services          |    | 1,918           |
| Marketing and business development              |    | 217             |
| General, administrative, and other              |    | 1,794           |
| Total operating expenses                        |    | <u>37,656</u>   |
| Operating loss                                  |    | (23,260)        |
| Non-operating income:                           |    |                 |
| Interest income                                 |    | 71              |
| Net loss  | \$ | <u>(23,189)</u> |
| Member's equity as of April 6, 2023 (inception) | \$ | -               |
| Net loss  |    | (23,189)        |
| Member's deficit as of December 31, 2024        | \$ | <u>(23,189)</u> |

*See accompanying notes to financial statements.*

# MIAX SAPPHIRE, LLC

## Statement of Cash Flows

For the period from April 6, 2023 (inception) to December 31, 2024 (dollars in thousands)

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|   |    |                     |
|---|----|---------------------|
| Cash flow from operating activities:              |    |                     |
| Net loss  | \$ | (23,189)            |
| Changes in operating assets and liabilities:      |    |                     |
| Accounts receivable                               |    | (11,208)            |
| Other current assets                              |    | (213)               |
| Other assets                                      |    | (1,743)             |
| Accounts payable and other liabilities            |    | 7,132               |
| Net cash used in operating activities             |    | <u>(29,221)</u>     |
| <br>  |    |                     |
| Cash flow from financing activities:              |    |                     |
| Due to Miami International Holdings, Inc.         |    | <u>34,580</u>       |
| Net cash provided by financing activities         |    | <u>34,580</u>       |
| Increase in cash and cash equivalents             |    | 5,359               |
| Cash and cash equivalents at beginning of year    |    | <u>-</u>            |
| <br>  |    |                     |
| Cash and cash equivalents at end of year          | \$ | <u><u>5,359</u></u> |
| <br>  |    |                     |
| Supplemental disclosure of cash flow information: |    |                     |
| Cash paid for taxes                               | \$ | -                   |
| Cash paid for interest                            | \$ | -                   |

*See accompanying notes to financial statements.*

# MIAX SAPPHIRE, LLC

## Notes to Financial Statements

As of December 31, 2024 and for the Period From April 6, 2023 (inception) to December 31, 2024

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### 1. NATURE OF OPERATIONS

MIAX Sapphire, LLC (“MIAX Sapphire” 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 launched in August 2024.

### 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 4 - 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.

#### *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, 2024.

#### *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 using an aging schedule. The aging schedule applies loss rates based on historical loss information and as deemed necessary, is adjusted for the difference in the nature of the receivables that exist at the reporting date from the historical period. 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 the short-term nature of the accounts receivable, changes in future economic conditions are not expected to have a significant impact on the expected credit losses.

#### *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

# MIAX SAPPHIRE, LLC

## Notes to Financial Statements

As of December 31, 2024 and for the Period From April 6, 2023 (inception) to December 31, 2024

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International Holdings, Inc. See Note 4 - 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 Options"), MIAX Emerald, LLC ("MIAX Emerald") and MIAX Pearl, LLC ("MIAX Pearl"). The Company's allocated portion of costs are included in the accompanying statement of operations and changes in member's deficit. The Company considers changes in Due to Miami International Holdings Inc., to be financing activity for purposes of the statement 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 fees:* Transaction fees represent fees the Company charges to its exchange member firms, as customers, for the performance obligation of executing a trade on the Company's exchange. These fees can be variable based on trade volume tiered discounts; however, as all tiered discounts are calculated monthly, the actual discount is recorded on a monthly basis in accordance with the Company's published fee schedules. Transaction fees are recorded as transactions occur on a trade-date basis.

Tiered discounts are offered to customers based on the amount of trades that are executed on the Company's exchange. As these are volume driven, they reduce the transaction price and are recorded net in transaction fees on the statement of operations and changes in member's deficit. Liquidity payments paid for certain customer transactions are accounted for as consideration payable to a customer and are recorded separately as liquidity payments, which are classified within cost of revenues in the statement of operations and changes in member's deficit.

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 operations 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

# MIAX SAPPHIRE, LLC

## Notes to Financial Statements

As of December 31, 2024 and for the Period From April 6, 2023 (inception) to December 31, 2024

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use other related functions of the exchange. 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 the Options Price Reporting Authority's ("OPRA") tape plan. Market data revenue includes distributions from OPRA, 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, liquidity payments 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.

*Concentration of revenue:* For the year ended December 31, 2024, three customers generated 61% of the Company's total revenue. No customer is contractually or otherwise obligated to continue to use the Company's services. The loss of, or a significant reduction of, participation by these customers may have a material adverse effect on the Company's business, financial position, results of operations and cash flows.

### *Income Taxes*

The Company is a disregarded LLC for U.S. income tax. 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. Accordingly, no provision for income taxes is provided in the accompanying financial statements.

### *Segment Information*

The Company is engaged in a single line of business operating an options exchange in the United States which is a national securities exchange regulated by the SEC. The Company has identified its Chief Executive Officer as the chief operating decision maker ("CODM"). The CODM primarily uses net revenues (revenues less cost of revenues) and operating income included in the statement of operations and changes in member's deficit to evaluate the results of the business and manage the Company. The Company's operations constitute a single operating segment and therefore, a single reportable segment, because the CODM manages the business activities using information of the Company as a whole. The significant expenses of the segment are reported on the statement of operations and changes in member's deficit. The accounting policies used to measure the financial results of the segment are the same as the significant accounting policies described herein.

### *Recent Accounting Pronouncements*

#### Recent Accounting Pronouncements – Adopted

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which updates reportable segment disclosure requirements primarily through enhanced disclosures about significant segment expenses. The amendments are effective for fiscal years beginning after December 15, 2023, and for interim periods within fiscal years beginning after December 15, 2024. The Company retrospectively adopted the ASU for the period ended December 31, 2024. The adoption of the standard did not have any material impact on the Company's financial statements.

#### Recent Accounting Pronouncements - Not yet Adopted

In November 2024, the FASB issued ASU 2024-03, Income Statement—Reporting Comprehensive Income—

# MIAX SAPPHIRE, LLC

## Notes to Financial Statements

As of December 31, 2024 and for the Period From April 6, 2023 (inception) to December 31, 2024

Expense Disaggregation Disclosures. ASU 2024-03 amends ASC 220, Comprehensive Income to expand income statement expense disclosures and require disclosure in the notes to the financial statements of specified information about certain costs and expenses. ASU 2024-03 is required to be adopted for fiscal years commencing after December 15, 2026 with early adoption permitted. The Company expects to adopt the update for the annual financial statements issued for the year ending December 31, 2027 and is currently evaluating the impact of adopting the standard on the financial statements.

### 3. ACCOUNTS PAYABLE AND OTHER LIABILITIES

The following table presents the components of accounts payable and other liabilities as at December 31, 2024 (in thousands):

|  |    |              |
|--|----|--------------|
| Liquidity payments payable             | \$ | 5,184        |
| Section 31 fees payable                |    | 1,395        |
| Accounts payable and other             |    | 553          |
| Accounts payable and other liabilities | \$ | <u>7,132</u> |

### 4. RELATED PARTY TRANSACTIONS

The Company 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 period from inception to December 31, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Compensation and benefits                      | \$ | 24,913        |
| Information technology and communication costs |    | 5,665         |
| Occupancy costs                                |    | 3,149         |
| Professional fees and outside services         |    | 840           |
| Marketing and business development             |    | 217           |
| General, administrative, and other             |    | 1,244         |
| Total operating expenses                       | \$ | <u>36,028</u> |

### 5. 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 was 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 June 7, 2022, the USPTO Director denied Nasdaq's request for review of the PTAB Final Written Decisions.

# MIAX SAPPHIRE, LLC

## Notes to Financial Statements

As of December 31, 2024 and for the Period From April 6, 2023 (inception) to December 31, 2024

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On August 31, 2021, MIH filed an Answer and Counterclaims in the NJ District Court (the “MIH’s Answer”). MIH’s Answer included denials of the allegations made by Nasdaq in the Complaint and Counterclaims by MIH 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. 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. MIH filed an Amended Answer and Counterclaims on August 5, 2022. The Amended Counterclaims added claims of fraud on the patent office and Lanham Act violations. On July 25, 2023, the Court denied a motion by MIH to dismiss Nasdaq’s trade secret claims and also denied a motion by Nasdaq to dismiss MIH’s counterclaims. The Court granted Nasdaq’s motion to stay and bifurcate MIH’s counterclaims. Accordingly, the trade secret case is currently proceeding and MIH’s counterclaims are stayed until the conclusion of the trade secret case at which time the parties may proceed to litigate MIH’s counterclaims against Nasdaq. The parties each filed a motion for summary judgment and motions to exclude certain experts. We anticipate the Court will decide the motions in the second half of 2025. MIH intends to continue defending 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 condition, the statement of operations and changes in member’s deficit 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.

## **6. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company’s financial statements through June 12, 2025, 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, 2024

**Miami International Technologies, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

Current assets:

|                           |    |                  |
|---------------------------|----|------------------|
| Cash and cash equivalents | \$ | 35               |
| Accounts receivable, net  |    | <u>64</u>        |
| Total current assets      |    | 99               |
| <br>                      |    |                  |
| Total assets              | \$ | <u><u>99</u></u> |

**Liabilities and member's deficit**

|   |    |                  |
|---|----|------------------|
| Due to Miami International Holdings, Inc. | \$ | <u>23,000</u>    |
| Total liabilities                         |    | <u>23,000</u>    |
| <br>                                      |    |                  |
| Member's deficit:                         |    |                  |
| Total member's deficit                    |    | <u>(22,901)</u>  |
| Total liabilities and member's deficit    | \$ | <u><u>99</u></u> |

**Miami International Technologies, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|  |  |                   |
|--|--|-------------------|
| Revenues:                                      |  |                   |
| Other revenue                                  |  | \$ <u>906</u>     |
| Total revenues                                 |  | <u>906</u>        |
| Operating expense:                             |  |                   |
| Compensation and benefits                      |  | 3,107             |
| Information technology and communication costs |  | 259               |
| Occupancy costs                                |  | 49                |
| Professional fees and outside services         |  | 549               |
| General, administrative, and other             |  | <u>49</u>         |
| Total operating expenses                       |  | <u>4,013</u>      |
| Operating loss                                 |  | (3,107)           |
| Non-operating income:                          |  |                   |
| Interest income                                |  | <u>2</u>          |
| Net loss                                       |  | <u>\$ (3,105)</u> |

**MIAX Global Derivatives, LLC**  
**(Formerly known as Futures Holdco, LLC)**  
Financial Statements (Unaudited)  
As of and for the year ended December 31, 2024

**MIAX Global Derivatives, LLC**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2024 (dollars in thousands)**

---

**Assets**

|                            |                   |
|----------------------------|-------------------|
| Investment in subsidiaries | \$ 156,133        |
| Total assets               | <u>\$ 156,133</u> |

**Liabilities and member's deficit**

|  |                   |
|--|-------------------|
| Member's deficit:                      |                   |
| Total member's deficit                 | \$ 156,133        |
| Total liabilities and member's deficit | <u>\$ 156,133</u> |

**M 9 Holdings, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**M 9 Holdings, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|   |   | <b>Assets</b> |                 |
|---|---|---------------|-----------------|
| Current assets:                         |   |               |                 |
|   | Total current assets                      |               | \$ -            |
|   | Total assets                              |               | <u>\$ -</u>     |
| <b>Liabilities and member's deficit</b> |   |               |                 |
| Current liabilities:                    |   |               |                 |
|   | Total current liabilities                 |               | \$ -            |
|   | Due to Miami International Holdings, Inc. |               | <u>70,455</u>   |
|   | Total liabilities                         |               | <u>70,455</u>   |
| Member's deficit:                       |   |               |                 |
|   | Total member's deficit                    |               | <u>(70,455)</u> |
|   | Total liabilities and member's deficit    |               | <u>\$ -</u>     |

**M 9 Holdings, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

Revenues:

|                |               |
|----------------|---------------|
| Other revenue  | \$ <u>625</u> |
| Total revenues | <u>625</u>    |

Operating expenses:

|  |              |
|--|--------------|
| Compensation and benefits                      | 19,801       |
| Information technology and communication costs | 1,620        |
| Occupancy costs                                | 687          |
| Professional fees and outside services         | 259          |
| General, administrative, and other             | <u>1,386</u> |
| Total operating expenses                       | 23,753       |

Operating loss (23,128)

Net loss \$ (23,128)

**The Bermuda Stock Exchange**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**The Bermuda Stock Exchange**  
**Statement of Income (Unaudited) and Surplus / (Deficit)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

|  |                  |
|--|------------------|
| Current assets:                                    |                  |
| Cash and cash equivalents                          | \$ 603           |
| Accounts receivable, net                           | 795              |
| Current portion of derivative assets               | 33,536           |
| Other current assets                               | <u>134</u>       |
| Total current assets                               | 35,068           |
| Due from Miami International Holdings, Inc.        | 497              |
| Fixed assets, net of depreciation and amortization | 2,790            |
| Derivative assets, net of current portion          | 50,304           |
| Other assets                                       | <u>177</u>       |
| Total assets                                       | <u>\$ 88,836</u> |

**Liabilities and member's equity**

|  |                  |
|--|------------------|
| Current Liabilities:                   |                  |
| Accounts payable and other liabilities | \$ 129           |
| Accrued compensation payable           | 266              |
| Deferred transaction revenues          | <u>843</u>       |
| Total current liabilities              | 1,238            |
| Total liabilities                      | <u>1,238</u>     |
| Member's equity:                       |                  |
| Share capital and contributed surplus  | 6,481            |
| Accumulated surplus                    | <u>81,117</u>    |
| Total equity                           | <u>87,598</u>    |
| Total liabilities and member's equity  | <u>\$ 88,836</u> |

**The Bermuda Stock Exchange**  
**Statement of Income (Unaudited) and Surplus / (Deficit)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|  |    |                |
|--|----|----------------|
| Revenues:                                      |    |                |
| Transaction and clearing fees                  | \$ | 219            |
| Access fees                                    |    | 144            |
| Market data fees                               |    | 319            |
| Other revenue                                  |    | <u>2,629</u>   |
| Total revenues                                 |    | <u>3,311</u>   |
| Operating expenses:                            |    |                |
| Compensation and benefits                      |    | 2,006          |
| Information technology and communication costs |    | 333            |
| Depreciation and amortization                  |    | 493            |
| Occupancy costs                                |    | 527            |
| Professional fees and outside services         |    | 681            |
| Marketing and business development             |    | 94             |
| General, administrative, and other             |    | <u>493</u>     |
| Total operating expenses                       |    | <u>4,627</u>   |
| Operating loss                                 |    | (1,316)        |
| Non-operating income:                          |    |                |
| Gain on sale of intangible asset               |    | 52,604         |
| Unrealized gain on derivative assets           |    | <u>83,840</u>  |
| Net income                                     | \$ | <u>135,128</u> |

**M 402 Holdings, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**M 402 Holdings, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

|                            |                          |
|----------------------------|--------------------------|
| Investment in subsidiaries | <u>\$ 111,031</u>        |
| Total assets               | <u><u>\$ 111,031</u></u> |

**Liabilities and member's equity**

|                                       |                          |
|---------------------------------------|--------------------------|
| Member's equity:                      |                          |
| Total member's equity                 | <u>111,031</u>           |
| Total liabilities and member's equity | <u><u>\$ 111,031</u></u> |

**M 402 Holdings, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|                              |  |    |                        |
|------------------------------|--|----|------------------------|
| Revenues:                    |  | \$ | <u>          -</u>     |
| Total revenues               |  |    | <u>          -</u>     |
| Non-operating income:        |  |    |                        |
| Intercompany dividend income |  | \$ | <u>          1,895</u> |
| Net income                   |  | \$ | <u>          1,895</u> |

**MIAX Futures Exchange, LLC**  
**(Formerly known as Minneapolis Grain Exchange, LLC)**  
Financial Statements (Unaudited)  
As of and for the year ended December 31, 2024

**MIAX Futures Exchange, LLC**  
**Statement of Income (Unaudited) and Member's Equity**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

|  |                          |
|--|--------------------------|
| Current assets:                                      |                          |
| Cash and cash equivalents                            | \$ 19,934                |
| Accounts receivable, net                             | 598                      |
| Restricted cash                                      | 6,000                    |
| Clearing house performance bonds and guarantee funds | 87,744                   |
| Other current assets                                 | <u>130</u>               |
| Total current assets                                 | 114,406                  |
| Investment in third parties                          | 1,580                    |
| Fixed assets, net of depreciation and amortization   | <u>32</u>                |
| Total assets   | <u><u>\$ 116,018</u></u> |

**Liabilities and member's equity**

|  |                          |
|--|--------------------------|
| Current liabilities:                                 |                          |
| Accounts payable and other liabilities               | \$ 1,581                 |
| Accrued compensation payable                         | 952                      |
| Deferred transaction revenues                        | 1,374                    |
| Clearing house performance bonds and guarantee funds | <u>87,744</u>            |
| Total current liabilities                            | 91,651                   |
| Due to Miami International Holdings, Inc.            | <u>413</u>               |
| Total liabilities                                    | <u>92,064</u>            |
| Member's equity:                                     |                          |
| Total member's equity                                | <u>23,954</u>            |
| Total liabilities and member's equity                | <u><u>\$ 116,018</u></u> |

**MIAX Futures Exchange, LLC**  
**Statement of Income (Unaudited) and Member's Equity**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|  |               |
|--|---------------|
| Revenues:                                      |               |
| Transaction and clearing fees                  | \$ 8,847      |
| Market data fees                               | 2,961         |
| Other revenue                                  | <u>5,267</u>  |
| Total revenues                                 | <u>17,075</u> |
| Cost of Revenues:                              |               |
| Liquidity payments                             | 773           |
| Brokerage, clearing, and exchange fees         | 3,387         |
| Other cost of revenues                         | <u>2,301</u>  |
| Total cost of revenues                         | <u>6,461</u>  |
| Revenues less cost of revenues                 | 10,614        |
| Operating expenses:                            |               |
| Compensation and benefits                      | 6,484         |
| Information technology and communication costs | 491           |
| Depreciation and amortization                  | 493           |
| Occupancy costs                                | 853           |
| Professional fees and outside services         | 724           |
| Marketing and business development             | 29            |
| General, administrative, and other             | <u>1,121</u>  |
| Total operating expenses                       | <u>10,195</u> |
| Operating income                               | 419           |
| Non-operating income (expense):                |               |
| Interest income                                | 477           |
| Interest expense                               | (173)         |
| Other, net                                     | <u>(1)</u>    |
| Net income                                     | <u>\$ 722</u> |

**MGEX Real Estate Holdings, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**MGEX Real Estate Holdings, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

|  |    |                      |
|--|----|----------------------|
| Current assets:                                    |    |                      |
| Cash and cash equivalents                          | \$ | 266                  |
| Accounts receivable, net                           |    | <u>369</u>           |
| Total current assets                               |    | 635                  |
| Fixed assets, net of depreciation and amortization |    | 9,449                |
| Other assets                                       |    | <u>112</u>           |
| Total assets                                       | \$ | <u><u>10,196</u></u> |

**Liabilities and member's equity**

|   |    |                      |
|---|----|----------------------|
| Current liabilities:                      |    |                      |
| Accounts payable and other liabilities    | \$ | 415                  |
| Accrued compensation payable              |    | 69                   |
| Deferred transaction revenues             |    | <u>2</u>             |
| Total current liabilities                 |    | 486                  |
| Due to Miami International Holdings, Inc. |    | <u>54</u>            |
| Total liabilities                         |    | <u>540</u>           |
| Member's equity:                          |    |                      |
| Total member's equity                     |    | <u>9,656</u>         |
| Total liabilities and member's equity     | \$ | <u><u>10,196</u></u> |

**MGEX Real Estate Holdings, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|  |                                   |
|--|-----------------------------------|
| Revenues:                                      |                                   |
| Other revenue                                  | <u>\$          926</u>            |
| Total revenues                                 | <u>                  926</u>      |
| Operating expenses:                            |                                   |
| Compensation and benefits                      | 331                               |
| Information technology and communication costs | 18                                |
| Depreciation and amortization                  | 590                               |
| Occupancy costs                                | 1,158                             |
| Professional fees and outside services         | 54                                |
| Marketing and business development             | 11                                |
| General, administrative, and other             | <u>2,042</u>                      |
| Total operating expenses                       | <u>4,204</u>                      |
| Operating loss                                 | <u>(3,278)</u>                    |
| Net loss                                       | <u><u>\$          (3,278)</u></u> |

**Dorman Trading, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**Dorman Trading, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

Current assets:

|   |    |               |
|---|----|---------------|
| Cash and cash equivalents   | \$ | 9,226         |
| Cash and securities segregated under federal and other regulations                        |    | 30,809        |
| Accounts receivable, net  |    | 102           |
| Receivables from broker-dealers, futures commission merchants, and clearing organizations |    | 147,664       |
| Other current assets  |    | <u>10,947</u> |
| Total current assets  |    | 198,748       |

Other assets

|              |    |                       |
|--------------|----|-----------------------|
|              |    | <u>3,826</u>          |
| Total assets | \$ | <u><u>202,574</u></u> |

**Liabilities and member's equity**

Current liabilities:

|  |    |              |
|--|----|--------------|
| Accounts payable and other liabilities | \$ | 6,038        |
| Accrued compensation payable           |    | 1,243        |
| Payables to customers                  |    | 152,637      |
| Payables to clearing organizations     |    | <u>2,746</u> |
| Total current liabilities              |    | 162,664      |

Due to Miami International Holdings, Inc.

5,133

Other non-current liabilities

639

Total liabilities

168,436

Member's equity:

|                       |               |
|-----------------------|---------------|
| Total member's equity | <u>34,138</u> |
|-----------------------|---------------|

|                                       |                          |
|---------------------------------------|--------------------------|
| Total liabilities and member's equity | \$ <u><u>202,574</u></u> |
|---------------------------------------|--------------------------|

**Dorman Trading, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|  |                 |
|--|-----------------|
| Revenues:                                      |                 |
| Transaction and clearing fees                  | \$ 69,612       |
| Access fees                                    | 694             |
| Market data fees                               | 783             |
| Other revenue                                  | <u>6,751</u>    |
| Total revenues                                 | <u>77,840</u>   |
| Cost of Revenues:                              |                 |
| Liquidity payments                             | 6,712           |
| Brokerage, clearing, and exchange fees         | 59,290          |
| Other  | <u>2,998</u>    |
| Total cost of revenues                         | <u>69,000</u>   |
| Revenues less cost of revenues                 | 8,840           |
| Operating expenses:                            |                 |
| Compensation and benefits                      | 7,063           |
| Information technology and communication costs | 1,026           |
| Occupancy costs                                | 448             |
| Professional fees and outside services         | 702             |
| General, administrative, and other             | <u>396</u>      |
| Total operating expenses                       | <u>9,635</u>    |
| Operating loss                                 | (795)           |
| Non-operating income:                          |                 |
| Other income                                   | <u>1,485</u>    |
| Income before income tax provision             | 690             |
| Income tax benefit                             | <u>2,188</u>    |
| Net income                                     | <u>\$ 2,878</u> |

**M 7 Holdings, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**M 7 Holdings, LLC**  
**Statement of Financial Condition (Unaudited)**  
**December 31, 2024 (dollars in thousands)**

---

**Assets**

|                            |                         |
|----------------------------|-------------------------|
| Investment in subsidiaries | <u>\$ 45,101</u>        |
| Total assets               | <u><u>\$ 45,101</u></u> |

**Liabilities and member's equity**

|                                       |                         |
|---------------------------------------|-------------------------|
| Member's equity:                      |                         |
| Total member's equity                 | <u>\$ 45,101</u>        |
| Total liabilities and member's equity | <u><u>\$ 45,101</u></u> |

**LedgerX LLC d/b/a MIAX Derivatives Exchange**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**LedgerX LLC d/b/a MIAX Derivatives Exchange**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

Current assets:

|                             |    |            |
|-----------------------------|----|------------|
| Cash and cash equivalents   | \$ | 18,038     |
| Accounts receivable, net    |    | 475        |
| Restricted cash             |    | 270        |
| Participant margin deposits |    | 1,234      |
| Other current assets        |    | <u>327</u> |
| Total current assets        |    | 20,344     |

Other assets

|              |    |                      |
|--------------|----|----------------------|
|              |    | <u>71</u>            |
| Total assets | \$ | <u><u>20,415</u></u> |

**Liabilities and member's equity**

Current liabilities:

|  |    |              |
|--|----|--------------|
| Accounts payable and other liabilities | \$ | 1,083        |
| Accrued compensation payable           |    | 1,091        |
| Deferred transaction revenues          |    | 250          |
| Participant margin deposits            |    | <u>1,234</u> |
| Total current liabilities              |    | 3,658        |

Due to Miami International Holdings, Inc.

|                   |  |                      |
|-------------------|--|----------------------|
|                   |  | <u>12,704</u>        |
| Total liabilities |  | <u><u>16,362</u></u> |

Member's equity:

|                                       |    |                      |
|---------------------------------------|----|----------------------|
| Total member's equity                 |    | <u>4,053</u>         |
| Total liabilities and member's equity | \$ | <u><u>20,415</u></u> |

**LedgerX LLC d/b/a MIAX Derivatives Exchange**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|  |    |                        |
|--|----|------------------------|
| Revenues:                                      |    |                        |
| Transaction and clearing fees                  | \$ | 643                    |
| Other revenue                                  |    | <u>1,088</u>           |
| Total revenues                                 |    | <u>1,731</u>           |
| Operating expenses:                            |    |                        |
| Compensation and benefits                      |    | 6,753                  |
| Information technology and communication costs |    | 1,529                  |
| Occupancy costs                                |    | 82                     |
| Professional fees and outside services         |    | 3,215                  |
| General, administrative, and other             |    | <u>1,226</u>           |
| Total operating expenses                       |    | <u>12,805</u>          |
| Operating loss                                 |    | (11,074)               |
| Non-operating income:                          |    |                        |
| Interest income                                |    | 422                    |
| Other, net                                     |    | <u>393</u>             |
| Net loss                                       | \$ | <u><u>(10,259)</u></u> |

**MIH East Holdings, Limited**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**MIH East Holdings, Limited**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

Current assets:

|                           |              |
|---------------------------|--------------|
| Cash and cash equivalents | \$ 2,102     |
| Total current assets      | <u>2,102</u> |

|                             |                  |
|-----------------------------|------------------|
| Investment in third parties | <u>16,842</u>    |
| Total assets                | <u>\$ 18,944</u> |

**Liabilities and member's equity**

|   |               |
|---|---------------|
| Due to Miami International Holdings, Inc. | \$ 15,867     |
| Total liabilities                         | <u>15,867</u> |

Member's equity:

|                                       |                  |
|---------------------------------------|------------------|
| Total member's equity                 | <u>3,077</u>     |
| Total liabilities and member's equity | <u>\$ 18,944</u> |

**MIH East Holdings, Limited**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|                          |  |    |              |
|--------------------------|--|----|--------------|
| Revenues:                |  | \$ | -            |
| Total revenues           |  |    | -            |
| Operating expenses:      |  |    | -            |
| Total operating expenses |  |    | -            |
| Non-operating income:    |  |    |              |
| Interest income          |  |    | 43           |
| Dividend income          |  |    | 1,114        |
| Net income               |  | \$ | <u>1,157</u> |

**ConvexityShares, LLC**

Financial Statements (Unaudited)

As of and for the year ended December 31, 2024

**ConvexityShares, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

**Assets**

Current assets:

|                           |    |           |
|---------------------------|----|-----------|
| Cash and cash equivalents | \$ | 13        |
| Total current assets      |    | <u>13</u> |

|              |    |                  |
|--------------|----|------------------|
| Total assets | \$ | <u><u>13</u></u> |
|--------------|----|------------------|

**Liabilities and member's deficit**

|   |    |              |
|---|----|--------------|
| Due to Miami International Holdings, Inc. | \$ | 1,932        |
| Total liabilities                         |    | <u>1,932</u> |

Member's deficit:

|  |    |                  |
|--|----|------------------|
| Total member's deficit                 |    | <u>(1,919)</u>   |
| Total liabilities and member's deficit | \$ | <u><u>13</u></u> |

**ConvexityShares, LLC**  
**Statement of Income (Unaudited)**  
**For the year ended December 31, 2024 (dollars in thousands)**

---

|  |    |                     |
|--|----|---------------------|
| Revenues:                              | \$ | -                   |
| Total revenues                         |    | <u>-</u>            |
| Operating expenses:                    |    |                     |
| Compensation and benefits              |    | 30                  |
| Professional fees and outside services |    | 246                 |
| Total operating expenses               |    | <u>276</u>          |
| Operating loss                         |    | (276)               |
| Net loss                               | \$ | <u><u>(276)</u></u> |

**MIAX EMERALD, LLC**

Financial Statements

As of and for the year ended December 31, 2024

(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

To the Member and Board of Directors of  
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, 2024, and the related statements of income and changes in member's equity, 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, 2024, 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 12, 2025

**MIAX EMERALD, LLC**  
**Statement of Financial Condition**  
**December 31, 2024 (dollars in thousands)**

---

|   | <b>Assets</b>                          |                      |
|---|--|----------------------|
| Current assets:                             |  |                      |
| Cash and cash equivalents                   | \$                                     | 5,735                |
| Accounts receivable                         |  | 20,879               |
| Other current assets                        |  | 118                  |
| Total current assets                        |  | <u>26,732</u>        |
| Notes receivable, net                       |  | 10,911               |
| Due from Miami International Holdings, Inc. |  | 56,642               |
| Other assets                                |  | 1,000                |
| Total assets                                | \$                                     | <u><u>95,285</u></u> |
|   | <b>Liabilities And Member's Equity</b> |                      |
| Current liabilities:                        |  |                      |
| Accounts payable and other liabilities      | \$                                     | 15,330               |
| Deferred transaction revenue                |  | 105                  |
| Total current liabilities                   |  | <u>15,435</u>        |
| Commitments and contingencies (Note 6)      |  |                      |
| Member's equity                             |  | <u>79,850</u>        |
| Total liabilities and member's equity       | \$                                     | <u><u>95,285</u></u> |

*See accompanying notes to financial statements.*

**MIAX EMERALD, LLC**  
**Statement of Income and Changes in Member's Equity**  
**Year Ended December 31, 2024 (dollars in thousands)**

---

|  |                         |
|--|-------------------------|
| Revenues:                                      |                         |
| Transaction fees                               | \$ 256,512              |
| Access fees                                    | 28,042                  |
| Market data fees                               | 5,881                   |
| Other revenue                                  | 36                      |
| Total revenues                                 | <u>290,471</u>          |
| Cost of revenues:                              |                         |
| Liquidity payments                             | 217,087                 |
| Brokerage and exchange fees                    | 1,671                   |
| Section 31 fees                                | 10,170                  |
| Total cost of revenues                         | <u>228,928</u>          |
| Revenues less cost of revenues                 | 61,543                  |
| Operating expenses:                            |                         |
| Compensation and benefits                      | 13,755                  |
| Information technology and communication costs | 5,553                   |
| Occupancy costs                                | 508                     |
| Professional fees and outside services         | 5,454                   |
| Marketing and business development             | 14                      |
| General, administrative, and other             | 1,414                   |
| Total operating expenses                       | <u>26,698</u>           |
| Operating income                               | 34,845                  |
| Non-operating income:                          |                         |
| Interest income                                | 212                     |
| Net income                                     | <u>\$ 35,057</u>        |
| Member's equity at beginning of year           | \$ 44,793               |
| Net income                                     | <u>35,057</u>           |
| Member's equity at end of year                 | <u><u>\$ 79,850</u></u> |

*See accompanying notes to financial statements.*

**MIAX EMERALD, LLC**  
**Statement of Cash Flows**  
**Year Ended December 31, 2024 (dollars in thousands)**

---

|   |                 |
|---|-----------------|
| Cash flow from operating activities:  |                 |
| Net income  | \$ 35,057       |
| Adjustments to reconcile net income to net cash provided by operating activities: |                 |
| Provision for notes receivable credit losses                                      | 573             |
| Changes in operating assets and liabilities:                                      |                 |
| Accounts receivable   | (9,536)         |
| Notes receivable  | (1,534)         |
| Other assets  | (77)            |
| Accounts payable and other liabilities  | 7,435           |
| Deferred transaction revenue  | 12              |
| Net cash provided by operating activities   | <u>31,930</u>   |
| Cash flow from investing activities:  |                 |
| Due from Miami International Holdings, Inc.                                       | <u>(28,487)</u> |
| Net cash used in investing activities   | <u>(28,487)</u> |
| Increase in cash and cash equivalents   | 3,443           |
| Cash and cash equivalents at beginning of year                                    | <u>2,292</u>    |
| Cash and cash equivalents at end of year  | <u>\$ 5,735</u> |
| Supplemental disclosure of cash flow information:                                 |                 |
| Cash paid for taxes   | \$ -            |
| Cash paid for interest  | \$ -            |

*See accompanying notes to financial statements.*

# **MIAX EMERALD, LLC**

## **Notes to Financial Statements**

### **As of and for the Year Ended December 31, 2024**

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

MIAX Emerald, LLC (“MIAX Emerald” or the “Company”), a wholly owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), 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 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.

##### ***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, 2024.

##### ***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 using an aging schedule. The aging schedule applies loss rates based on historical loss information and as deemed necessary, is adjusted for the difference in the nature of the receivables that exist at the reporting date from the historical period. 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 the short-term nature of the accounts receivable, changes in future economic conditions are not expected to have a significant impact on the expected credit losses.

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

The Parent or the Parent's other wholly owned subsidiaries may incur certain expenditures on behalf of the Company or receive cash from the Company generated from its operations. Expenses incurred and cash provided 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 either due to or due from Miami

# MIAX EMERALD, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2024

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International Holdings, Inc. on the statement of financial condition. 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 Options"), MIAX Pearl, LLC ("MIAX Pearl") and MIAX Sapphire, LLC ("MIAX Sapphire"). The Company's allocated portion of cost are included in the accompanying statement of income and changes in member's equity. The Company considers changes in Due from Miami International Holdings, Inc. to be investing activity for purposes of the statement 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 fees:* Transaction fees represent fees the Company charges to its exchange member firms, as customers, for the performance obligation of executing a trade on the Company's exchange. These fees can be variable based on trade volume tiered discounts; however, as all tiered discounts are calculated monthly, the actual discount is recorded on a monthly basis in accordance with the Company's published fee schedules. Transaction fees are recorded as transactions occur on a trade-date basis.

Tiered discounts are offered to customers based on the amount of trades that are executed on the Company's exchange. As these are volume driven, they reduce the transaction price and are recorded net in transaction fees on the statement of income and changes in member's equity. Liquidity payments paid for certain customer transactions are accounted for as consideration payable to a customer and are recorded separately as liquidity payments, which are classified within cost of revenues in the statement of income and changes in member's equity.

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 equity.

*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

# MIAX EMERALD, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2024

---

use other related functions of the exchange. 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 the Options Price Reporting Authority's ("OPRA") tape plan. Market data revenue includes distributions from OPRA, 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, liquidity payments 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.

*Concentration of revenue:* For the year ended December 31, 2024, three customers generated 62% of the Company's total revenue. No customer is contractually or otherwise obligated to continue to use the Company's services. The loss of, or a significant reduction of, participation by these customers may have a material adverse effect on the Company's business, financial position, results of operations and cash flows.

*Deferred transaction revenue:* Deferred transaction revenue consists of prepaid transaction and non-transaction fees which are recognized as revenue when earned.

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

The Company is a disregarded LLC for U.S. income tax. 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. Accordingly, no provision for income taxes is provided in the accompanying financial statements.

#### ***Segment Information***

The Company is engaged in a single line of business operating an options exchange in the United States which is a national securities exchange regulated by the SEC. The Company has identified its Chief Executive Officer as the chief operating decision maker ("CODM"). The CODM primarily uses net revenues (revenues less cost of revenues) and operating income included in the statement of income and changes in member's equity to evaluate the results of the business and manage the Company. The Company's operations constitute a single operating segment and therefore, a single reportable segment, because the CODM manages the business activities using information of the Company as a whole. The significant expenses of the segment are reported on the statement of income and changes in member's equity. The accounting policies used to measure the financial results of the segment are the same as the significant accounting policies described herein.

#### ***Recent Accounting Pronouncements***

Recent Accounting Pronouncements – Adopted

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which updates reportable segment disclosure requirements primarily through enhanced disclosures about significant segment expenses. The amendments are effective for fiscal years beginning after December 15, 2023, and for interim periods within fiscal years beginning after December 15, 2024. The Company retrospectively adopted the ASU for the period ended December 31, 2024. The adoption of the standard did not have any material impact on the Company's financial statements.

# MIAX EMERALD, LLC

## Notes to Financial Statements

### As of and for the Year Ended December 31, 2024

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#### Recent Accounting Pronouncements - Not yet Adopted

In November 2024, the FASB issued ASU 2024-03, Income Statement—Reporting Comprehensive Income—Expense Disaggregation Disclosures. ASU 2024-03 amends ASC 220, Comprehensive Income to expand income statement expense disclosures and require disclosure in the notes to the financial statements of specified information about certain costs and expenses. ASU 2024-03 is required to be adopted for fiscal years commencing after December 15, 2026 with early adoption permitted. The Company expects to adopt the update for the annual financial statements issued for the year ending December 31, 2027 and is currently evaluating the impact of adopting the standard on the financial statements.

### 3. NOTES RECEIVABLE, NET

The notes receivable relates 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 and operation of the CAT was provided by the Self-Regulatory Organizations (“SROs”), which include the Company's exchange and by broker-dealers in exchange for promissory notes, a portion of which were expected to be repaid by Consolidated Audit Trail, LLC (“CAT LLC”).

On September 6, 2023, the SEC issued an order approving a revised CAT funding model calculated based on the share of transactions executed. The funding model consists of two categories: (i) CAT fees assessed to executing brokers to recover a portion of historical CAT costs previously paid by the SROs; and (ii) CAT fees assessed to executing brokers and SROs to fund prospective CAT costs (the “prospective fee”). During the first week of January 2024, the SROs submitted fee filings with the SEC to implement the applicable transaction-based fee rates that are to be assessed to executing brokers to recover a portion of historical CAT costs incurred prior to 2022 and use the collected funds to repay a portion of the promissory notes to the SROs. On January 17, 2024, the SEC issued orders suspending each SRO's fee filing and instituting proceedings to determine whether to approve or disapprove the fees, as published in the Federal Register on February 13, 2024.

In August 2024, the SROs submitted fee filings again with the SEC to implement fees to recover a portion of historical CAT costs incurred prior to 2022. Effective October 1, 2024, CAT LLC began collecting fees from executing brokers on behalf of the SROs and from December 2024, has started remitting funds collected from the industry members to the SROs to pay back the promissory notes issued prior to January 1, 2022. Additional historical fees to recover historical cost incurred between January 1, 2022 and July 15, 2024 are planned to be introduced at a later time through separate fee filings submitted by the SROs.

The SROs submitted another fee filing in August 2024 with the SEC to implement the applicable transaction-based fee rates which are predetermined by CAT LLC to cover a portion of prospective CAT costs, effective as of September 3, 2024. The prospective fee will continue to fund CAT LLC's operations. In November 2024, CAT LLC started invoicing the SROs and the executing brokers for their respective portion of the prospective fee. The Company does not expect to issue additional promissory notes to fund CAT as CAT LLC has begun collecting the prospective fees.

On October 17, 2023, certain parties filed a legal challenge in court against the SEC's order above. On April 16, 2024, a putative class action was filed alleging, that the SEC engaged in unlawful agency action and violated multiple provisions of the U.S. Constitution when mandating the creation and funding of the CAT. These challenges or any other litigation related to the CAT funding model may significantly delay its implementation. As a result, SROs may continue to incur additional CAT costs and/or it may result in SROs not being able to collect on the promissory notes related to the CAT funding.

**MIAX EMERALD, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2024**

---

The following table presents the change in the notes receivable, net of allowance for the notes receivable as of December 31, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Balance at January 1, 2024                       | \$ | 9,950         |
| Notes issued, net of allowance for credit losses |    | 1,145         |
| Repayments                                       |    | (184)         |
| Balance at December 31, 2024                     | \$ | <u>10,911</u> |

The allowance for notes receivable associated with CAT is calculated primarily based on the structure of the notes and potential outcomes under the CAT funding model.

The following represents the change in allowance for notes receivable for the year ended December 31, 2024 (in thousands):

|  |    |              |
|--|----|--------------|
| Balance at January 1, 2024               | \$ | 4,981        |
| Provision for uncollectible amount       |    | 573          |
| Write-offs charged against the allowance |    | -            |
| Recoveries collected                     |    | -            |
| Balance at December 31, 2024             | \$ | <u>5,554</u> |

**4. ACCOUNTS PAYABLE AND OTHER LIABILITIES**

The following table presents the components of accounts payable and other liabilities as at December 31, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Liquidity payments payable             | \$ | 9,160         |
| Section 31 fees payable                |    | 5,036         |
| Accounts payable and other             |    | 1,134         |
| Accounts payable and other liabilities | \$ | <u>15,330</u> |

**5. RELATED PARTY TRANSACTIONS**

The Company 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, 2024 (in thousands):

|  |    |               |
|--|----|---------------|
| Compensation and benefits                      | \$ | 13,755        |
| Information technology and communication costs |    | 5,553         |
| Occupancy costs                                |    | 508           |
| Professional fees and outside services         |    | 3,839         |
| Marketing and business development             |    | 14            |
| General, administrative, and other             |    | 487           |
| Total operating expenses                       | \$ | <u>24,156</u> |

**MIAX EMERALD, LLC**  
**Notes to Financial Statements**  
**As of and for the Year Ended December 31, 2024**

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**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 was 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 June 7, 2022, the USPTO Director denied Nasdaq's request for review of the PTAB Final Written Decisions.

On August 31, 2021, MIH filed an Answer and Counterclaims in the NJ District Court (the "MIH's Answer"). MIH's Answer included denials of the allegations made by Nasdaq in the Complaint and Counterclaims by MIH 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. 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. MIH filed an Amended Answer and Counterclaims on August 5, 2022. The Amended Counterclaims added claims of fraud on the patent office and Lanham Act violations. On July 25, 2023, the Court denied a motion by MIH to dismiss Nasdaq's trade secret claims and also denied a motion by Nasdaq to dismiss MIH's counterclaims. The Court granted Nasdaq's motion to stay and bifurcate MIH's counterclaims. Accordingly, the trade secret case is currently proceeding and MIH's counterclaims are stayed until the conclusion of the trade secret case at which time the parties may proceed to litigate MIH's counterclaims against Nasdaq. The parties each filed a motion for summary judgment and motions to exclude certain experts. We anticipate the Court will decide the motions in the second half of 2025. MIH intends to continue defending 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 condition, the statement of income and changes in member's equity 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 12, 2025, 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 USA LLC**

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

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

SEC #: 8- 34354  
 CRD #: 14020

**AKUNA SECURITIES LLC**

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

Approval Date: 7/1/2024  
**Membership Activities:**  
 Primary Lead, Lead/Registered Mkt 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: 3/1/2019  
**Membership Activities:**  
 Clearance  
 International Tele #

SEC #: 8- 23522  
 CRD #: 13071

**BARCLAYS CAPITAL INC.**

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

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

SEC #: 8- 41342  
 CRD #: 19714

**BELVEDERE TRADING LLC**

10 S. Riverside Plaza, Suite 2100  
 Chicago IL 60606  
 Tele #: (312) 893-3750

Approval Date: 9/15/2022  
**Membership Activities:**  
 Primary Lead, Lead & Registered Market Maker  
 International Tele #

SEC #: 8- 66612  
 CRD #: 132605

**BOFA SECURITIES, INC.**

One Bryant Park  
 New York NY 10036  
 Tele #: (646) 743-2734

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

SEC #: 8- 69787  
 CRD #: 283942

**CITADEL SECURITIES LLC**

200 South Biscayne Blvd., 33rd Floor  
 Miami FL 33131  
 Tele #: (312) 395-2100

Approval Date: 3/1/2019  
**Membership Activities:**  
 Primary Lead/Lead/Reg. Mkt Maker/Order Entry/Clearance  
 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  
**Membership Activities:**  
 Order Entry & Clearance  
 International Tele #

SEC #: 8- 8177  
 CRD #: 7059

**CLEAR STREET LLC**

55 Broadway  
 New York NY 10006  
 Tele #: (646) 738-4066

Approval Date: 4/1/2024  
**Membership Activities:**  
 Clearance  
 International Tele #

SEC #: 8- 69972  
 CRD #: 288933

**DASH FINANCIAL TECHNOLOGIES LLC**

200 S. Wacker Drive, Ste. 2450

Chicago IL 60606

Tele #: (312) 986-2006

Approval Date: 3/1/2019

SEC #: 8- 52503

**Membership Activities:**

CRD #: 104031

Order Entry &amp; Clearance

International Tele #

**GLOBAL EXECUTION BROKERS, LP**

401 City Avenue, Ste. 200

Bala Cynwyd PA 19004

Tele #: (610) 617-2600

Approval Date: 3/1/2019

SEC #: 8- 65878

**Membership Activities:**

CRD #: 126407

Order Entry

International Tele #

**GOLDMAN SACHS & CO. LLC**

200 West Street

New York NY 10282

Tele #: (212) 902-1000

Approval Date: 3/1/2019

SEC #: 8- 129

**Membership Activities:**

CRD #: 361

Order Entry &amp; Clearance

International Tele #

**GROUP ONE TRADING LLC**

425 S. Financial Place - Ste. 3400

Chicago IL 60605

Tele #: (312) 347-8864

Approval Date: 3/1/2019

SEC #: 8- 47762

**Membership Activities:**

CRD #: 37484

Order Entry

International Tele #

**HRT FINANCIAL LP**

175 Greenwich Street - 76th Floor

3 World Trade Center

New York NY 10007

Tele #: (212) 293-1444

Approval Date: 3/1/2019

SEC #: 8- 68430

**Membership Activities:**

CRD #: 152144

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: 3/1/2019

SEC #: 8- 52600

**Membership Activities:**

CRD #: 104143

Primary Lead, Lead &amp; Registered Market Maker

International Tele #

**INSTINET, LLC**

Worldwide Plaza

309 West 49th Street

New York NY 10019

Tele #: (212) 310-9500

Approval Date: 3/1/2019

SEC #: 8- 23669

**Membership Activities:**

CRD #: 7897

Order Entry &amp; Clearance

International Tele #

**INTERACTIVE BROKERS LLC**

One Pickwick Plaza - 2nd Floor

Greenwich CT 06830

Tele #: (203) 618-5710

Approval Date: 3/1/2019

SEC #: 8- 47257

**Membership Activities:**

CRD #: 36418

Order Entry &amp; Clearance

International Tele #

**J.P. MORGAN SECURITIES LLC**

383 Madison Avenue

New York NY 10179

Tele #: (212) 272-2000

Approval Date: 3/1/2019

SEC #: 8- 35008

**Membership Activities:**

CRD #: 79

Order Entry &amp; Clearance

International Tele #

**JANE STREET CAPITAL, LLC**

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

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

SEC #: 8- 52275  
 CRD #: 103782

**JANE STREET OPTIONS, LLC**

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

Approval Date: 3/8/2019  
**Membership Activities:**  
 Primary Lead, Lead Mkt Maker/Order Entry  
 International Tele #

SEC #: 8- 66813  
 CRD #: 134159

**JEFFERIES LLC**

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

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

SEC #: 8- 15074  
 CRD #: 2347

**JUMP TRADING, LLC**

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

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

SEC #: 8- 52989  
 CRD #: 106124

**MATRIX EXECUTIONS, LLC**

135 S. LaSalle Street, Ste. 3900  
 Chicago IL 60603  
 Tele #: (312) 334-8000

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

SEC #: 8- 48255  
 CRD #: 38455

**MORGAN STANLEY & CO. LLC**

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

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

SEC #: 8- 15869  
 CRD #: 8209

**OLD MISSION CAPITAL, LLC**

1 N. Dearborn Street - 8th Floor  
 Chicago IL 60602  
 Tele #: (312) 260-3052

Approval Date: 6/3/2024  
**Membership Activities:**  
 Market Maker  
 International Tele #

SEC #: 8- 67867  
 CRD #: 146991

**OPTIVER US LLC**

130 E. Randolph Street, Ste. 800  
 Chicago IL 60601  
 Tele #: (312) 821-9500

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

SEC #: 8- 66083  
 CRD #: 128030

**PERSHING LLC**

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

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

SEC #: 8- 17574  
 CRD #: 7560

**RQD\* CLEARING, LLC**

425 South Financial Place - Suite 910B  
Chicago IL 60605  
Tele #: (312) 692-5000

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

SEC #: 8- 66826  
CRD #: 134284

**SIMPLEX TRADING, LLC**

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

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

SEC #: 8- 68556  
CRD #: 153585

**SUSQUEHANNA INVESTMENT GROUP**

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

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

SEC #: 8- 37520  
CRD #: 33875

**SUSQUEHANNA SECURITIES, LLC**

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

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

SEC #: 8- 47034  
CRD #: 35874

**TWO SIGMA SECURITIES, LLC**

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

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

SEC #: 8- 68090  
CRD #: 148960

**UBS SECURITIES LLC**

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

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

SEC #: 8- 22651  
CRD #: 7654

**WELLS FARGO SECURITIES, LLC**

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

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

SEC #: 8- 65876  
CRD #: 126292

**WOLVERINE EXECUTION SERVICES, LLC**

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

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

SEC #: 8- 65336  
CRD #: 120719

**WOLVERINE TRADING, LLC**

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

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

SEC #: 8- 47484  
CRD #: 36848

Total BD Firms 36

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                     | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| A             | AGILENT TECHNOLOGIES INC.               | D                | Equity           |
| AA            | ALCOA Corporation                       | D                | Equity           |
| AAAU          | GOLDMAN SACHS PHYSICAL GOLD ETF         | D                | ETF              |
| AAL           | AMERICAN AIRLINES GROUP INC.            | D                | Equity           |
| AAOI          | APPLIED OPTOELECTRONICS, INC.           | D                | Equity           |
| AAON          | AAON INC                                | D                | Equity           |
| AAP           | ADVANCE AUTO PARTS INC.                 | D                | Equity           |
| AAPL          | APPLE INC.                              | D                | Equity           |
| AAPU          | Direxion Daily AAPL Bull 2X Shares      | D                | ETF              |
| AB            | AllianceBernstein Holding L.P.          | D                | Equity           |
| ABAT          | AMERICAN BATTERY TECHNOLOGY CO.         | D                | Equity           |
| ABBV          | ABBVIE INC.                             | D                | Equity           |
| ABCL          | ABCELLERA BIOLOGICS, INC.               | D                | Equity           |
| ABEO          | ABEONA THERAPEUTICS INC.                | D                | Equity           |
| ABEV          | AMBEV S.A.                              | D                | Equity           |
| ABG           | ASBURY AUTOMOTIVE GROUP INCCOM          | D                | Equity           |
| ABM           | ABM INDUSTRIES INCORPORATED             | D                | Equity           |
| ABNB          | Airbnb, Inc.                            | D                | Equity           |
| ABOS          | ACUMEN PHARMACEUTICALS, INC.            | D                | Equity           |
| ABR           | Arbor Realty Trust, Inc.                | D                | Equity           |
| ABSI          | ABSCI CORPORATION                       | D                | Equity           |
| ABT           | ABBOTT LABORATORIES                     | D                | Equity           |
| ABUS          | Arbutus Biopharma Corporation           | D                | Equity           |
| ACA           | ARCOSA INC                              | D                | Equity           |
| ACAD          | ACADIA PHARMACEUTICALS INC.             | D                | Equity           |
| ACB           | Aurora Cannabis Inc.                    | D                | Equity           |
| ACCO          | ACCO Brands Corp                        | D                | Equity           |
| ACDC          | ProFrac Holding Corporation             | D                | Equity           |
| ACEL          | ACCEL ENTERTAINMENT, INC.               | D                | Equity           |
| ACET          | ADICET BIO INC                          | D                | Equity           |
| ACGL          | ARCH CAPITAL GROUP Ltd                  | D                | Equity           |
| ACHC          | Acadia Healthcare Co Inc                | D                | Equity           |
| ACHR          | Archer Aviation Inc.                    | D                | Equity           |
| ACHV          | ACHIEVE LIFE SCIENCES, INC.             | D                | Equity           |
| ACI           | ALBERTSONS COMPANIES, INC.              | D                | Equity           |
| ACIC          | American Coastal Insurance Corporation  | D                | Equity           |
| ACIU          | AC IMMUNE SA                            | D                | Equity           |
| ACIW          | ACI Worldwide, Inc.                     | D                | Equity           |
| ACLS          | Axcelis Technologies Inc.               | D                | Equity           |
| ACLX          | ARCELLX, INC.                           | D                | Equity           |
| ACM           | Aecom Technology Corporation            | D                | Equity           |
| ACMR          | ACM Research, Inc.                      | D                | Equity           |
| ACN           | ACCENTURE PLC                           | D                | Equity           |
| ACR           | ACRES Commercial Realty Corp.           | D                | Equity           |
| ACRE          | Ares Commercial Real Estate Corporation | D                | Equity           |
| ACRS          | Aclaris Therapeutics, Inc.              | D                | Equity           |
| ACTG          | ACACIA RESEARCH CORPORATION             | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                        | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| ACVA          | ACV AUCTIONS INC                           | D                | Equity           |
| ACWI          | iShares MSCI ACWI Index Fund               | D                | ETF              |
| ACXP          | ACURX PHARMACEUTICALS LLC                  | D                | Equity           |
| ADAP          | Adaptimmune Therapeutics PLC               | D                | Equity           |
| ADBE          | ADOBE SYSTEMS INC.                         | D                | Equity           |
| ADC           | Agree Realty Corporation                   | D                | Equity           |
| ADEA          | Adeia Inc.                                 | D                | Equity           |
| ADI           | ANALOG DEVICES INC                         | D                | Equity           |
| ADM           | ARCHER DANIELS MIDLAND COMPANY             | D                | Equity           |
| ADMA          | ADMA Biologics Inc                         | D                | Equity           |
| ADNT          | Adient plc                                 | D                | Equity           |
| ADP           | AUTOMATIC DATA PROCESSING INC              | D                | Equity           |
| ADPT          | Adaptive Biotechnologies Corp              | D                | Equity           |
| ADSK          | AUTODESK, INC.                             | D                | Equity           |
| ADT           | ADT Inc.                                   | D                | Equity           |
| ADTN          | ADTRAN, INC.                               | D                | Equity           |
| ADUS          | Addus HomeCare Corporation                 | D                | Equity           |
| ADVM          | Adverum Biotechnologies, Inc.              | D                | Equity           |
| AEE           | AMEREN CORPORATION                         | D                | Equity           |
| AEG           | AEGON N.V.                                 | D                | Equity           |
| AEHR          | AEHR TEST SYSTEMS                          | D                | Equity           |
| AEIS          | Advanced Energy Industries, Inc.           | D                | Equity           |
| AEM           | AGNICO-EAGLE MINES LTD.                    | D                | Equity           |
| AEO           | AMERICAN EAGLE OUTFITTERS, INC.            | D                | Equity           |
| AEP           | AMERICAN ELECTRIC POWER COMPANY, INC.      | D                | Equity           |
| AER           | AerCap Holdings NV                         | D                | Equity           |
| AES           | AES CORP.                                  | D                | Equity           |
| AESI          | ATLAS ENERGY SOLUTIONS INC                 | D                | Equity           |
| AEVA          | Aeva Technologies, Inc.                    | D                | Equity           |
| AEYE          | AudioEye, Inc.                             | D                | Equity           |
| AFCG          | AFC GAMMA INC                              | D                | Equity           |
| AFG           | AMERICAN FINANCIAL GROUP                   | D                | Equity           |
| AFL           | AFLAC INC.                                 | D                | Equity           |
| AFRM          | AFFIRM HOLDINGS, INC.                      | D                | Equity           |
| AG            | First Majestic Silver Corp                 | D                | Equity           |
| AGCO          | AGCO CORPORATION                           | D                | Equity           |
| AGEN          | Agenus Inc.                                | D                | Equity           |
| AGG           | iShares Core U.S. Aggregate Bond ETF       | D                | ETF              |
| AGI           | ALAMOS GOLD INC                            | D                | Equity           |
| AGIO          | Agios Pharmaceuticals Inc                  | D                | Equity           |
| AGL           | AGILON HEALTH INC                          | D                | Equity           |
| AGM           | Federal Agricultural Mortgage Corp. (CI C) | D                | Equity           |
| AGNC          | AGNC Investment Corp.                      | D                | Equity           |
| AGO           | ASSURED GUARANTY LTD.                      | D                | Equity           |
| AGQ           | PROSHARES ULTRA SILVER                     | D                | ETF              |
| AGRO          | AdecoAgro S.A.                             | D                | Equity           |
| AGS           | PLAYAGS INC                                | D                | Equity           |

| Emerald Securities List as of 6/2/2025 |   |           |           |
|--|---|-----------|-----------|
| Symbol                                 | Company Name                                      | List Exch | Inst Type |
| AGX                                    | Argan Inc   | D         | Equity    |
| AGYS                                   | AGILYSYS INC                                      | D         | Equity    |
| AHCO                                   | ADAPTHEALTH CORP.                                 | D         | Equity    |
| AHH                                    | Armada Hoffler Properties, Inc.                   | D         | Equity    |
| AHR                                    | American Healthcare REIT, Inc.                    | D         | Equity    |
| AI                                     | C3.ai, Inc.                                       | D         | Equity    |
| AIG                                    | AMERICAN INTERNATIONAL GROUP, INC.                | D         | Equity    |
| AIOT                                   | PowerFleet, Inc.                                  | D         | Equity    |
| AIP                                    | ARTERIS, INC.                                     | D         | Equity    |
| AIQ                                    | GLOBAL X ARTIFICIAL INTELLIGENCE & TECHNOLOGY ETF | D         | ETF       |
| AIR                                    | AAR Corp.   | D         | Equity    |
| AIRG                                   | Airgain Inc                                       | D         | Equity    |
| AIRS                                   | AIRSCULPT TECHNOLOGIES, INC.                      | D         | Equity    |
| AISP                                   | AIRSHIP AI HOLDINGS, INC.                         | D         | Equity    |
| AIV                                    | Apartment Investment and Management Company       | D         | Equity    |
| AIZ                                    | Assurant Inc.                                     | D         | Equity    |
| AJG                                    | ARTHUR J. GALLAGHER & CO.                         | D         | Equity    |
| AKAM                                   | AKAMAI TECHNOLOGIES, INC.                         | D         | Equity    |
| AKBA                                   | Akebia Therapeutics, Inc.                         | D         | Equity    |
| AKRO                                   | AKERO THERAPEUTICS, INC.                          | D         | Equity    |
| AL                                     | Air Lease Corp                                    | D         | Equity    |
| ALAB                                   | Astera Labs, Inc.                                 | D         | Equity    |
| ALB                                    | Albemarle Corporation                             | D         | Equity    |
| ALC                                    | ALCON INC   | D         | Equity    |
| ALDX                                   | ALDEYRA THERAPEUTICS, INC.                        | D         | Equity    |
| ALEC                                   | ALECTOR INC.                                      | D         | Equity    |
| ALGM                                   | ALLEGRO MICROSYSTEMS, INC.                        | D         | Equity    |
| ALGN                                   | ALIGN TECHNOLOGY INC.                             | D         | Equity    |
| ALGT                                   | Allegiant Travel Company                          | D         | Equity    |
| ALHC                                   | ALIGNMENT HEALTHCARE INC                          | D         | Equity    |
| ALIT                                   | Alight, Inc.                                      | D         | Equity    |
| ALK                                    | ALASKA AIR GROUP INC                              | D         | Equity    |
| ALKS                                   | ALKERMES PLC                                      | D         | Equity    |
| ALKT                                   | ALKAMI TECHNOLOGY INC                             | D         | Equity    |
| ALL                                    | THE ALLSTATE CORPORATION                          | D         | Equity    |
| ALLE                                   | ALLEGION PLC                                      | D         | Equity    |
| ALLO                                   | Allogene Therapeutics, Inc.                       | D         | Equity    |
| ALLT                                   | Allot Communications Ltd                          | D         | Equity    |
| ALLY                                   | ALLY FINANCIAL INC.                               | D         | Equity    |
| ALMS                                   | ALUMIS INC  | D         | Equity    |
| ALNY                                   | ALNYLAM PHARMACEUTICALS INC                       | D         | Equity    |
| ALRM                                   | Alarm.Com Holdings, Inc.                          | D         | Equity    |
| ALSN                                   | Allison Transmission Holdings, Inc.               | D         | Equity    |
| ALT                                    | Altimmune, Inc.                                   | D         | Equity    |
| ALTG                                   | ALTA EQUIPMENT GROUP INC                          | D         | Equity    |
| ALTO                                   | Alto Ingredients, Inc.                            | D         | Equity    |
| ALTS                                   | ALT5 SIGMA CORPORATION                            | D         | Equity    |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                     | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| ALV           | Autoliv, Inc                            | D                | Equity           |
| ALXO          | ALX ONCOLOGY HOLDINGS INC               | D                | Equity           |
| AM            | Antero Midstream Partners LP            | D                | Equity           |
| AMAT          | APPLIED MATERIALS, INC.                 | D                | Equity           |
| AMBA          | AMBARELLA, INC.                         | D                | Equity           |
| AMBC          | AMBAC FINANCIAL GROUP, INC.             | D                | Equity           |
| AMBP          | Ardagh Metal Packaging S.A.             | D                | Equity           |
| AMC           | AMC ENTERTAINMENT HOLDINGS, INC.        | D                | Equity           |
| AMCR          | AMCOR PLC                               | D                | Equity           |
| AMCX          | AMC Networks Inc.                       | D                | Equity           |
| AMD           | ADVANCED MICRO DEVICES, INC.            | D                | Equity           |
| AMDL          | GRANITESHARES 2X LONG AMD DAILY ETF     | D                | ETF              |
| AMDY          | YIELDMAX AMD OPTION INCOME STRATEGY ETF | D                | ETF              |
| AME           | AMETEK, INC.                            | D                | Equity           |
| AMED          | AMEDISYS INC                            | D                | Equity           |
| AMGN          | AMGEN INC.                              | D                | Equity           |
| AMH           | American Homes 4 Rent                   | D                | Equity           |
| AMKR          | AMKOR TECHNOLOGY, INC.                  | D                | Equity           |
| AMPL          | Alerian MLP ETF                         | D                | ETF              |
| AMLX          | AMYLYX PHARMACEUTICALS, INC.            | D                | Equity           |
| AMN           | AMN Healthcare Services, Inc.           | D                | Equity           |
| AMP           | AMERIPRISE FINANCIAL INC                | D                | Equity           |
| AMPH          | Amphastar Pharmaceuticals, Inc.         | D                | Equity           |
| AMPL          | AMPLITUDE INC                           | D                | Equity           |
| AMPX          | AMPRIUS TECHNOLOGIES INC                | D                | Equity           |
| AMPY          | Amplify Energy Corporation              | D                | Equity           |
| AMR           | Alpha Metallurgical Resources, Inc.     | D                | Equity           |
| AMRC          | Ameresco, Inc.                          | D                | Equity           |
| AMRK          | A-MARK PRECIOUS METALS, INC.            | D                | Equity           |
| AMRN          | AMARIN CORPORATION PLC                  | D                | Equity           |
| AMRX          | Amneal Pharmaceuticals, Inc.            | D                | Equity           |
| AMSC          | AMERICAN SUPERCONDUCTOR CORP            | D                | Equity           |
| AMT           | AMERICAN TOWER CL A                     | D                | Equity           |
| AMTM          | Amentum Holdings, Inc.                  | D                | Equity           |
| AMTX          | AEMETIS, INC.                           | D                | Equity           |
| AMWD          | American Woodmark Corp.                 | D                | Equity           |
| AMWL          | AMERICAN WELL CORP                      | D                | Equity           |
| AMX           | America Movil S.A.B. de C.V.            | D                | Equity           |
| AMZA          | InfraCap MLP ETF                        | D                | ETF              |
| AMZN          | AMAZON.COM INC.                         | D                | Equity           |
| AMZU          | Direxion Daily AMZN Bull 2X Shares      | D                | ETF              |
| AN            | AUTONATION, INC                         | D                | Equity           |
| ANAB          | AnaptysBio, Inc.                        | D                | Equity           |
| ANDE          | The Andersons, Inc.                     | D                | Equity           |
| ANET          | Arista Networks Inc                     | D                | Equity           |
| ANF           | ABERCROMBIE & FITCH COMPANY             | D                | Equity           |
| ANGI          | Angie Inc.                              | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                     | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| ANGO          | AngioDynamcis, Inc.                     | D                | Equity           |
| ANIP          | ANI Pharmaceuticals, Inc.               | D                | Equity           |
| ANIX          | ANIXA BIOSCIENCES, INC.                 | D                | Equity           |
| ANNX          | ANNEXON, INC.                           | D                | Equity           |
| ANRO          | Alto Neuroscience, Inc.                 | D                | Equity           |
| ANSS          | ANSYS, Inc.                             | D                | Equity           |
| ANVS          | ANNOVIS BIO INC                         | D                | Equity           |
| ANY           | SPHERE 3D CORP.                         | D                | Equity           |
| AON           | Aon plc                                 | D                | Equity           |
| AOS           | A.O. Smith Corporation                  | D                | Equity           |
| AOSL          | Alpha & Omega Semiconductor, Ltd.       | D                | Equity           |
| AOUT          | AMERICAN OUTDOOR BRANDS, INC.           | D                | Equity           |
| APA           | APACHE CORPORATION                      | D                | Equity           |
| APAM          | Artisan Partners Asset Management, Inc. | D                | Equity           |
| APD           | AIR PRODUCTS AND CHEMICALS,INC          | D                | Equity           |
| APEI          | American Public Education, Inc.         | D                | Equity           |
| APG           | API GROUP CORPORATION                   | D                | Equity           |
| APGE          | APOGEE THERAPEUTICS, INC.               | D                | Equity           |
| APH           | Amphenol Corporation                    | D                | Equity           |
| API           | AGORA, INC.                             | D                | Equity           |
| APLD          | APPLIED DIGITAL CORPORATION             | D                | Equity           |
| APLE          | Apple Hospitality REIT, Inc.            | D                | Equity           |
| APLS          | Apellis Pharmaceuticals Inc             | D                | Equity           |
| APLT          | APPLIED THERAPEUTICS, INC.              | D                | Equity           |
| APO           | Apollo Global Management LLC            | D                | Equity           |
| APOG          | Apogee Enterprises, Inc.                | D                | Equity           |
| APP           | APPLOVIN CORP                           | D                | Equity           |
| APPF          | Appfolio Inc                            | D                | Equity           |
| APPN          | Appian Corporation                      | D                | Equity           |
| APPS          | Digital Turbine, Inc.                   | D                | Equity           |
| APT           | ALPHA PRO TECH LTD.                     | D                | Equity           |
| APTV          | Aptiv PLC                               | D                | Equity           |
| APYX          | Apyx Medical Corporation                | D                | Equity           |
| AQN           | ALGONQUIN POWER & UTILITIES CORP        | D                | Equity           |
| AQST          | AQUESTIVE THERAPEUTICS, INC.            | D                | Equity           |
| AR            | ANTERO RESOURCES CORPORATION            | D                | Equity           |
| ARAY          | Accuray Incorporated                    | D                | Equity           |
| ARBE          | ARBE ROBOTICS LTD                       | D                | Equity           |
| ARBK          | ARGO BLOCKCHAIN PLC                     | D                | Equity           |
| ARCB          | ARCBEST CORPORATION                     | D                | Equity           |
| ARCC          | Ares Capital Corporation                | D                | Equity           |
| ARCO          | ARCOS DORADOS HOLDINGS INC. CLA         | D                | Equity           |
| ARCT          | Arcturus Therapeutics Holdings Inc.     | D                | Equity           |
| ARDT          | ARDENT HEALTH PARTNERS, INC.            | D                | Equity           |
| ARDX          | Ardelyx, Inc.                           | D                | Equity           |
| ARE           | Alexandria Real Estate Equities, Inc.   | D                | Equity           |
| AREC          | AMERICAN RESOURCES CORP                 | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>  | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| AREN          | ARENA GROUP HOLDINGS, INC.                                       | D                | Equity           |
| ARES          | Ares Management, L.P.  | D                | Equity           |
| ARGT          | Global X MSCI Argentina ETF                                      | D                | ETF              |
| ARGX          | argenx SE  | D                | Equity           |
| ARHS          | ARHAUS, INC.   | D                | Equity           |
| ARI           | Apollo Commercial Real Estate Finance, Inc.                      | D                | Equity           |
| ARKB          | ARK 21Shares Bitcoin ETF   | D                | ETF              |
| ARKF          | ARK FINTECH INNOVATION   | D                | ETF              |
| ARKG          | ARK GENOMIC REVOLUTION ETF                                       | D                | ETF              |
| ARKK          | ARK Innovation ETF   | D                | ETF              |
| ARKO          | ARKO CORP  | D                | Equity           |
| ARKQ          | ARK AUTONOMOUS TECH & ROBOTICS                                   | D                | ETF              |
| ARKW          | ARK Next Generation Internet ETF                                 | D                | ETF              |
| ARKX          | ARK SPACE EXPLORATION & INNOVATION ETF                           | D                | ETF              |
| ARLO          | Arlo Technologies, Inc.  | D                | Equity           |
| ARLP          | ALLIANCE RESOURCE PARTNERS                                       | D                | Equity           |
| ARM           | ARM Holdings   | D                | Equity           |
| ARMK          | Aramark  | D                | Equity           |
| AROC          | Archrock, Inc.   | D                | Equity           |
| ARQ           | Arq, Inc.  | D                | Equity           |
| ARQT          | ARCUTIS BIOTHERAPEUTICS INC                                      | D                | Equity           |
| ARR           | ARMOUR Residential REIT, Inc.                                    | D                | Equity           |
| ARRY          | ARRY TECHNOLOGIES, INC.  | D                | Equity           |
| ARTY          | iShares Future AI & Tech ETF                                     | D                | ETF              |
| ARVN          | Arvinas,inc  | D                | Equity           |
| ARW           | ARROW ELECTRONICS INC.   | D                | Equity           |
| ARWR          | ARROWHEAD RESEARCH CORP.   | D                | Equity           |
| AS            | AMER SPORTS INC  | D                | Equity           |
| ASA           | ASA Gold and Precious Metals Limited                             | D                | Equity           |
| ASAN          | Asana, Inc.  | D                | Equity           |
| ASB           | ASSOCIATED BANC CORP   | D                | Equity           |
| ASC           | Ardmore Shipping Corporation                                     | D                | Equity           |
| ASGN          | ASGN Inc.  | D                | Equity           |
| ASH           | ASHLAND INC  | D                | Equity           |
| ASHR          | Deutsche X-Trackers Harvest CSI 300 China A Shares ETF           | D                | ETF              |
| ASHS          | Deutsche X-trackers Harvest CSI 500 China A-Shares Small Cap ETF | D                | ETF              |
| ASLE          | AERSALE CORPORATION  | D                | Equity           |
| ASML          | ASML HOLDING NV  | D                | Equity           |
| ASND          | Ascendis Pharma A/S  | D                | Equity           |
| ASO           | ACADEMY SPORTS & OUTDOOR INC                                     | D                | Equity           |
| ASPI          | ASP Isotopes Inc.  | D                | Equity           |
| ASPN          | ASPEN AEROGELS, INC.   | D                | Equity           |
| ASRT          | Assertio Therapeutics, Inc.                                      | D                | Equity           |
| ASTH          | Astrana Health Inc.  | D                | Equity           |
| ASTL          | ALGOMA STEEL GROUP INC.  | D                | Equity           |
| ASTS          | AST SpaceMobile, Inc.  | D                | Equity           |
| ASUR          | Asure Software, Inc.   | D                | Equity           |

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|---------------|--|------------------|------------------|
| ASX           | ASE TECHNOLOGY HOLDING CO., LTD.       | D                | Equity           |
| ASYS          | Amtech Systems, Inc.                   | D                | Equity           |
| ATAI          | ATAI LIFE SCIENCES N.V.                | D                | Equity           |
| ATAT          | ATOURE LIFESTYLE HOLDINGS LTD.         | D                | Equity           |
| ATEC          | ALPHATEC HOLDINGS INC                  | D                | Equity           |
| ATEN          | A10 Networks, Inc.                     | D                | Equity           |
| ATEX          | Anterix Inc                            | D                | Equity           |
| ATGE          | Adtalem Global Education Inc.          | D                | Equity           |
| ATHA          | ATHIRA PHARMA, INC.                    | D                | Equity           |
| ATHM          | Autohome Inc (ADR)                     | D                | Equity           |
| ATI           | Allegheny Technologies, Inc.           | D                | Equity           |
| ATKR          | Atkore International Group, Inc        | D                | Equity           |
| ATLX          | ATLAS LITHIUM CORP                     | D                | Equity           |
| ATMU          | ATMUS FILTRATION TECHNOLOGIE           | D                | Equity           |
| ATNM          | Actinium Pharmaceuticals, Inc.         | D                | Equity           |
| ATO           | Atmos Energy Corp                      | D                | Equity           |
| ATOM          | ATOMERA INCORPORATED                   | D                | Equity           |
| ATOS          | Atossa Therapeutics, Inc.              | D                | Equity           |
| ATR           | AptarGroup, Inc.                       | D                | Equity           |
| ATRO          | ASTRONICS CORPORATION                  | D                | Equity           |
| ATUS          | Altice USA, Inc.                       | D                | Equity           |
| ATYR          | aTyr Pharma, Inc                       | D                | Equity           |
| AU            | ANGLOGOLD ASHANTI LTD.                 | D                | Equity           |
| AUDC          | AUDIOCODES LTD.                        | D                | Equity           |
| AUPH          | Aurinia Pharmaceuticals Inc.           | D                | Equity           |
| AUR           | Aurora Innovation, Inc.                | D                | Equity           |
| AUTL          | AUTOLUS THERAPEUTICS PLC               | D                | Equity           |
| AVAH          | AVEANNA HEALTHCARE HOLDINGS            | D                | Equity           |
| AVAV          | Aerovironment Inc                      | D                | Equity           |
| AVB           | AVALONBAY COMMUNITIES INC              | D                | Equity           |
| AVD           | American Vanguard Corp.                | D                | Equity           |
| AVDL          | Avadel Pharmaceuticals plc             | D                | Equity           |
| AVDX          | AVIDXCHANGE HOLDINGS INC               | D                | Equity           |
| AVGO          | Broadcom Inc.                          | D                | Equity           |
| AVGX          | DEFIANCE DAILY TARGET 2X LONG AVGO ETF | D                | ETF              |
| AVIR          | ATE PHARMACEUTICAL INC.                | D                | Equity           |
| AVNS          | Avanos Medical, Inc.                   | D                | Equity           |
| AVNW          | AVIAT NETWORKS INC                     | D                | Equity           |
| AVO           | MISSION PRODUCE INC                    | D                | Equity           |
| AVPT          | AvePoint, Inc                          | D                | Equity           |
| AVT           | AVNET INC                              | D                | Equity           |
| AVTR          | Avantor, Inc.                          | D                | Equity           |
| AVXL          | Anavex Life Sciences Corp.             | D                | Equity           |
| AVY           | AVERY DENNISON CORP.                   | D                | Equity           |
| AWI           | Armstrong World Industries, Inc.       | D                | Equity           |
| AWK           | American Water Works Co., Inc.         | D                | Equity           |
| AWRE          | Aware Inc                              | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| AX            | Axos Financial, Inc.                               | D                | Equity           |
| AXGN          | AxoGen, Inc.                                       | D                | Equity           |
| AXL           | AMERICAN AXLE & MFG. HLDNGS                        | D                | Equity           |
| AXON          | Axon Enterprise, Inc                               | D                | Equity           |
| AXP           | AMERICAN EXPRESS COMPANY                           | D                | Equity           |
| AXS           | AXIS CAPITAL HOLDINGS LIMITED                      | D                | Equity           |
| AXSM          | Axsome Therapeutics, Inc.                          | D                | Equity           |
| AXTA          | Axalta Coating Systems Ltd.                        | D                | Equity           |
| AXTI          | AXT, Inc.  | D                | Equity           |
| AYI           | Acuity Brands, Inc.                                | D                | Equity           |
| AZ            | A2Z CUST2MATE SOLUTIONS CORP.                      | D                | Equity           |
| AZEK          | AZEK COMPANY INC                                   | D                | Equity           |
| AZN           | ASTRAZENECA  | D                | Equity           |
| AZO           | AUTOZONE, INC.                                     | D                | Equity           |
| AZTA          | Azenta, Inc  | D                | Equity           |
| AZZ           | AZZ Incorporated                                   | D                | Equity           |
| B             | Barrick Mining Corporation                         | D                | Equity           |
| BA            | THE BOEING COMPANY                                 | D                | Equity           |
| BABA          | ALIBABA GROUP HOLDING LTD                          | D                | Equity           |
| BAC           | BANK OF AMERICA CORPORATION                        | D                | Equity           |
| BAH           | Booz Allen Hamilton Holding Corporation            | D                | Equity           |
| BALL          | Ball Corporation                                   | D                | Equity           |
| BAM           | Brookfield Asset Management Inc                    | D                | Equity           |
| BANC          | Banc of California, Inc.                           | D                | Equity           |
| BAND          | BANDWIDTH, INC                                     | D                | Equity           |
| BARK          | The Original BARK Company                          | D                | Equity           |
| BASE          | COUCHBASE, INC.                                    | D                | Equity           |
| BATRA         | Atlanta Braves Holdings, Inc. Series A             | D                | Equity           |
| BATRK         | Liberty Media Corporation (Series C) Liberty Brave | D                | Equity           |
| BAX           | BAXTER INTERNATIONAL INC.                          | D                | Equity           |
| BB            | Blackberry Limited                                 | D                | Equity           |
| BBAI          | BigBear.ai Holdings, Inc.                          | D                | Equity           |
| BBAR          | BBVA Banco Frances S.A                             | D                | Equity           |
| BBCP          | CONCRETE PUMPING HOLDINGS, INC.                    | D                | Equity           |
| BBD           | BANCO BRADESCO S.A.                                | D                | Equity           |
| BBDC          | Barings BDC, Inc.                                  | D                | Equity           |
| BBIO          | BridgeBio Pharma Inc                               | D                | Equity           |
| BBVA          | BANCO BILBAO VIZCAYA                               | D                | Equity           |
| BBW           | Build-A-Bear Workshop, Inc                         | D                | Equity           |
| BBWI          | Bath & Body Works, Inc.                            | D                | Equity           |
| BBY           | BEST BUY COMPANY, INC.                             | D                | Equity           |
| BC            | BRUNSWICK CORP                                     | D                | Equity           |
| BCAB          | BIOATLA, INC.                                      | D                | Equity           |
| BCC           | Boise Cascade Company                              | D                | Equity           |
| BCE           | BCE INC  | D                | Equity           |
| BCO           | THE BRINK'S COMPANY                                | D                | Equity           |
| BCRX          | BIOCRIST PHARMACEUTICAS INC                        | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                          | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| BCS           | BARCLAYS PLC                                 | D                | Equity           |
| BCSF          | BAIN CAPITAL SPECIALTY FINANCE, INC.         | D                | Equity           |
| BCYC          | BICYCLE THERAPEUTICS PLC                     | D                | Equity           |
| BDN           | Brandywine Realty Trust                      | D                | Equity           |
| BDRY          | BREAKWAVE DRY BULK SHIPPING ETF              | D                | ETF              |
| BDSX          | BIODESIX, INC.                               | D                | Equity           |
| BDTX          | Black Diamond Therapeutics, Inc.             | D                | Equity           |
| BDX           | BECTON, DICKINSON AND CO                     | D                | Equity           |
| BE            | Bloom Energy Corporation                     | D                | Equity           |
| BEAM          | BEAM THERAPEUTICS, INC.                      | D                | Equity           |
| BEEM          | BEAM GLOBAL                                  | D                | Equity           |
| BEKE          | E Holdings Inc                               | D                | Equity           |
| BEN           | FRANKLIN RESOURCES INC.                      | D                | Equity           |
| BEP           | BROOKFIELD RENEWABLE PARTNERS LP             | D                | Equity           |
| BEPC          | BROOKFIELD RENEWABLE CORPORATION             | D                | Equity           |
| BETZ          | Roundhill Sports Betting & iGaming ETF       | D                | Equity           |
| BFB           | Brown Forman Corporation Cl. B (150 shrs)    | D                | Equity           |
| BFH           | Bread Financial Holdings, Inc.               | D                | Equity           |
| BFLY          | Butterfly Network, Inc.                      | D                | Equity           |
| BG            | BUNGE LIMITED                                | D                | Equity           |
| BGC           | BGC Group, Inc.                              | D                | Equity           |
| BGFV          | Big 5 Sporting Goods Corp.                   | D                | Equity           |
| BGS           | B&G Foods Inc.                               | D                | Equity           |
| BHC           | Bausch Health Companies Inc.                 | D                | Equity           |
| BHF           | Brighthouse Financial, Inc.                  | D                | Equity           |
| BHP           | BHP BILLITON LIMITED                         | D                | Equity           |
| BHR           | Braemar Hotels & Resorts Inc.                | D                | Equity           |
| BHVN          | BIOHAVEN LTD                                 | D                | Equity           |
| BIDU          | BAIDU, INC.                                  | D                | Equity           |
| BIGC          | BigCommerce Holdings, Inc.                   | D                | Equity           |
| BIIB          | BIOGEN IDEC INC.                             | D                | Equity           |
| BIL           | SPDR Bloomberg Barclays 1-3 Month T-Bill ETF | D                | ETF              |
| BILI          | Bilibili Inc.                                | D                | Equity           |
| BILL          | Bill.com Holdings Inc                        | D                | Equity           |
| BIO           | Bio-Rad Laboratories, Inc.                   | D                | Equity           |
| BIOX          | BIOCERES CROP SOLUTIONS CORP.                | D                | Equity           |
| BIP           | Brookfield Infrastructure Partners L.P.      | D                | Equity           |
| BIPC          | BROOKFIELD INFRASTRUCTURE CORPORATION        | D                | Equity           |
| BIRK          | Birkenstock Holding Limited                  | D                | Equity           |
| BITB          | Bitwise Bitcoin ETF                          | D                | ETF              |
| BITF          | BITFARMS LTD.                                | D                | Equity           |
| BITI          | PROSHARES SHORT BITCOIN STRATEGY ETF         | D                | ETF              |
| BITO          | ProShares Bitcoin Strategy ETF               | D                | ETF              |
| BITQ          | BITWISE CRYPTO INDUSTRY INNOVATORS ETF       | D                | ETF              |
| BITU          | PROSHARES ULTRA BITCOIN ETF                  | D                | ETF              |
| BITX          | 2X BITCOIN STRATEGY ETF                      | D                | ETF              |
| BIZD          | VanEck BDC Income ETF                        | D                | ETF              |

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| <b>Symbol</b> | <b>Company Name</b>                       | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| BJ            | BJ's Warehouse Holdings, Inc.             | D                | Equity           |
| BJRI          | BJ S RESTAURANTS INC                      | D                | Equity           |
| BK            | THE BANK OF NEW YORK MELLON CORPORATION   | D                | Equity           |
| BKD           | Brookdale Senior Living Inc               | D                | Equity           |
| BKE           | The Buckle, Inc.                          | D                | Equity           |
| BKH           | BLACK HILLS CORPORATION                   | D                | Equity           |
| BKLN          | PowerShares Senior Loan (ETF)             | D                | ETF              |
| BKNG          | Booking Holdings Inc.                     | D                | Equity           |
| BKR           | Baker Hughes Company                      | D                | Equity           |
| BKSY          | BlackSky Technology Inc                   | D                | Equity           |
| BL            | BlackLine Inc                             | D                | Equity           |
| BLBD          | BLUEBIRD CORP                             | D                | Equity           |
| BLCO          | BAUSCH & LOMB CORP                        | D                | Equity           |
| BLD           | TopBuild Corp.                            | D                | Equity           |
| BLDE          | Blade Air Mobility, Inc.                  | D                | Equity           |
| BLDP          | BALLARD POWER SYSTEMS INC                 | D                | Equity           |
| BLDR          | Builders FirstSource Inc.                 | D                | Equity           |
| BLFS          | BioLife Solutions, Inc                    | D                | Equity           |
| BLK           | BLACKROCK INC                             | D                | Equity           |
| BLKB          | Blackbaud Inc.                            | D                | Equity           |
| BLMN          | Bloomin Brands Inc.                       | D                | Equity           |
| BLND          | BLEND LABS, INC                           | D                | Equity           |
| BLNK          | Blink Charging Co                         | D                | Equity           |
| BLOK          | Amplify Transformational Data Sharing ETF | D                | ETF              |
| BLZE          | BACKBLAZE, INC.                           | D                | Equity           |
| BMA           | Banco Macro S.A.                          | D                | Equity           |
| BMBL          | Bumble Inc.                               | D                | Equity           |
| BMEA          | Biomea Fusion, Inc.                       | D                | Equity           |
| BMO           | Bank of Montreal                          | D                | Equity           |
| BMRN          | BIOMARIN PHARMACEUTICAL INC.              | D                | Equity           |
| BMY           | BRISTOL-MYERS SQUIBB COMPANY              | D                | Equity           |
| BN            | BROOKFIELD CORPORATION                    | D                | Equity           |
| BND           | Vanguard Total Bond Market ETF            | D                | ETF              |
| BNDD          | KRANESHARES QUADRATIC DEFLATION ETF       | D                | ETF              |
| BNED          | Barnes & Noble Education, Inc.            | D                | Equity           |
| BNL           | Broadstone Net Lease, Inc.                | D                | Equity           |
| BNO           | United States Brent Oil ETF               | D                | ETF              |
| BNS           | Bank of Nova Scotia                       | D                | Equity           |
| BNTX          | BioNTech SE                               | D                | Equity           |
| BOC           | BOSTON OMAHA CORP                         | D                | Equity           |
| BOH           | Bank of Hawaii Corp.                      | D                | Equity           |
| BOIL          | PROSHARES ULTRA DJ-UBS NATURAL GAS        | D                | ETF              |
| BOOM          | DMC Global Inc.                           | D                | Equity           |
| BOOT          | Boot Barn Holdings, Inc.                  | D                | Equity           |
| BORR          | BORR DRILLING LIMITED                     | D                | Equity           |
| BOTZ          | Global X Robotics & Artifcl Intlgncl ETF  | D                | ETF              |
| BOX           | Box, Inc.                                 | D                | Equity           |

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|---------------|---|------------------|------------------|
| BP            | BP PLC                                  | D                | Equity           |
| BPMC          | Blueprint Medicines Corporation         | D                | Equity           |
| BPOP          | Popular Inc. (10 shrs)                  | D                | Equity           |
| BPT           | BP PRUDHOE BAY ROYALTY TRUST            | D                | Equity           |
| BR            | Broadridge Financial Solutions, Inc.    | D                | Equity           |
| BRAG          | BRAGG GAMING GROUP INC.                 | D                | Equity           |
| BRBR          | BellRing Brands Inc                     | D                | Equity           |
| BRCC          | BRC Inc.                                | D                | Equity           |
| BRDG          | BRIDGE INVESTMENT GROUP HOLDINGS, INC.  | D                | Equity           |
| BRFS          | BRF - Brasil Foods SA                   | D                | Equity           |
| BRKB          | BERKSHIRE HATHAWAY INC.                 | D                | Equity           |
| BRKR          | Bruker Corporation                      | D                | Equity           |
| BRLT          | BRILLIANT EARTH GROUP, INC.             | D                | Equity           |
| BRO           | BROWN & BROWN, INC                      | D                | Equity           |
| BROS          | DUTCH BROS INC.                         | D                | Equity           |
| BRSP          | BrightSpire Capital, Inc.               | D                | Equity           |
| BRY           | Berry Corporation                       | D                | Equity           |
| BRZE          | BRAZE, INC.                             | D                | Equity           |
| BRZU          | Direxion Daily Brazil Bull 3X ETF       | D                | ETF              |
| BSBR          | Banco Santander Brasil SA               | D                | Equity           |
| BSM           | Black Stone Minerals L.P.               | D                | Equity           |
| BSX           | BOSTON SCIENTIFIC CORPORATION           | D                | Equity           |
| BSY           | BENTLEY SYSTEMS INCORPORATED            | D                | Equity           |
| BTBT          | BIT DIGITAL, INC.                       | D                | Equity           |
| BTC           | Grayscale Bitcoin Mini Trust ETF        | D                | ETF              |
| BTCM          | BIT Mining Limited                      | D                | Equity           |
| BTDR          | BITDEER TECHNOLOGIES GROUP CLASS A      | D                | Equity           |
| BTE           | BAYTEX ENERGY CORP.                     | D                | Equity           |
| BTF           | VALKYRIE BITCOIN STRATEGY ETF           | D                | ETF              |
| BTG           | B2Gold Corp.                            | D                | Equity           |
| BTI           | British American Tobacco PLC            | D                | Equity           |
| BTSB          | BRIGHTSPRING HEALTH SERVICES INC        | D                | Equity           |
| BTU           | Peabody Energy Corporation              | D                | Equity           |
| BUD           | Anheuser-Busch InBev                    | D                | Equity           |
| BUG           | GLOBAL X CYBER SECURITY                 | D                | ETF              |
| BULL          | Webull Corporation                      | D                | Equity           |
| BUR           | BURFORD CAP LTD                         | D                | Equity           |
| BURL          | Burlington Stores Inc                   | D                | Equity           |
| BVN           | COMPANIA DE MINAS BUENAVENTURA S.A.-ADR | D                | Equity           |
| BVS           | Bioventus Inc.                          | D                | Equity           |
| BW            | Babcock & Wilcox Enterprises, Inc.      | D                | Equity           |
| BWA           | BORGWARNER INC.                         | D                | Equity           |
| BWEN          | BROADWIND, INC.                         | D                | Equity           |
| BWIN          | Baldwin Insurance Group, Inc.           | D                | Equity           |
| BWXT          | BWX Technologies, Inc.                  | D                | Equity           |
| BX            | THE BLACKSTONE GROUP LP                 | D                | Equity           |
| BXMT          | Blackstone Mortgage Trust, Inc.         | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                  | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--------------------------------------|------------------|------------------|
| BXP           | BOSTON PROPERTIES INC                | D                | Equity           |
| BXSL          | BLACKSTONE SECURED LENDING FUND      | D                | Equity           |
| BYD           | BOYD GAMING CORP.                    | D                | Equity           |
| BYND          | Beyond Meat, Inc.                    | D                | Equity           |
| BYON          | Beyond, Inc.                         | D                | Equity           |
| BYRN          | BYRNA TECHNOLOGIES INC.              | D                | Equity           |
| BZ            | KANZHUN LTD.                         | D                | Equity           |
| BZFD          | BUZZFEED, INC                        | D                | Equity           |
| BZH           | BEAZER HOMES USA INC.                | D                | Equity           |
| BZUN          | Baozun Inc.                          | D                | Equity           |
| C             | CITIGROUP, INC.                      | D                | Equity           |
| CAAP          | CORPORACION AMERICA AIRPORTS S.A.    | D                | Equity           |
| CAAS          | China Automotive Systems Inc         | D                | Equity           |
| CABA          | CABALETTA BIO, INC.                  | D                | Equity           |
| CACC          | Credit Acceptance Corp.              | D                | Equity           |
| CACI          | CACI INTERNATIONAL, INC.             | D                | Equity           |
| CADL          | CANDEL THERAPEUTICS, INC.            | D                | Equity           |
| CAE           | CAE Inc                              | D                | Equity           |
| CAG           | ConAgra Brands, Inc.                 | D                | Equity           |
| CAH           | CARDINAL HEALTH INC                  | D                | Equity           |
| CAKE          | THE CHEESECAKE FACTORY               | D                | Equity           |
| CAL           | Caleres, Inc.                        | D                | Equity           |
| CALF          | PACER US SMALL CAP CASH COWS 100 ETF | D                | ETF              |
| CALM          | Cal-Maine Foods, Inc.                | D                | Equity           |
| CALX          | Calix, Inc.                          | D                | Equity           |
| CAMT          | Camtek Ltd.                          | D                | Equity           |
| CAN           | CANAAN INC. SPONSORED ADR            | D                | Equity           |
| CANE          | Teucrium Sugar                       | D                | ETF              |
| CAPL          | CROSSAMERICA PARTNERS LP             | D                | Equity           |
| CAPR          | Capricor Therapeutics, Inc.          | D                | Equity           |
| CAR           | Avis Budget Group Inc                | D                | Equity           |
| CARG          | CarGurus, Inc.                       | D                | Equity           |
| CARR          | Carrier Global Corporation           | D                | Equity           |
| CARS          | Cars.com Inc.                        | D                | Equity           |
| CART          | Instacart (Maplebear Inc.)           | D                | Equity           |
| CASY          | Casey's General Stores, Inc.         | D                | Equity           |
| CAT           | CATERPILLAR INC.                     | D                | Equity           |
| CATX          | PERSPECTIVE THERAPEUTICS INC         | D                | Equity           |
| CAVA          | CAVA GROUP INC                       | D                | Equity           |
| CB            | Chubb Limited                        | D                | Equity           |
| CBAT          | CBAK ENERGY TECHNOLOGY, INC.         | D                | Equity           |
| CBL           | CBL & ASSOCIATES PROPERTIES, INC.    | D                | Equity           |
| CBOE          | CBOE HOLDINGS, INC.                  | D                | Equity           |
| CBRE          | CBRE Group, Inc.                     | D                | Equity           |
| CBRL          | Cracker Barrel Old Country Store     | D                | Equity           |
| CBT           | CABOT CORPORATION                    | D                | Equity           |
| CC            | The Chemours Company                 | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                               | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| CCCC          | C4 THERAPEUTICS, INC.                             | D                | Equity           |
| CCCS          | CCC Intelligent Solutions Holdings Inc.           | D                | Equity           |
| CCEP          | Coca-Cola European Partners plc                   | D                | Equity           |
| CCI           | CROWN CASTLE INTER.                               | D                | Equity           |
| CCJ           | CAMECO CORPORATION                                | D                | Equity           |
| CCK           | CROWN HOLDINGS INC.                               | D                | Equity           |
| CCL           | CARNIVAL CORPORATION                              | D                | Equity           |
| CCLD          | CareCloud, Inc.                                   | D                | Equity           |
| CCO           | Clear Channel Outdoor HLD Inc CL. A               | D                | Equity           |
| CCOI          | Cogent Communications Holdings, Inc.              | D                | Equity           |
| CCRN          | Cross Country Healthcare, Inc.                    | D                | Equity           |
| CCS           | Century Communities, Inc.                         | D                | Equity           |
| CDE           | COEUR d' ALENE MINES CORP                         | D                | Equity           |
| CDLX          | Cardlytics Inc                                    | D                | Equity           |
| CDNA          | CareDx, Inc                                       | D                | Equity           |
| CDNS          | CADENCE DESIGN SYSTEMS, I                         | D                | Equity           |
| CDW           | CDW CORPORATION                                   | D                | Equity           |
| CDXS          | Codexis Inc.                                      | D                | Equity           |
| CDZI          | Cadiz Inc.  | D                | Equity           |
| CE            | CELANESE CORPORATION                              | D                | Equity           |
| CECO          | CECO Environmental Corporation                    | D                | Equity           |
| CEG           | CONSTELLATION ENERGY CORPORATION                  | D                | Equity           |
| CELH          | Celsius Holdings, Inc.                            | D                | Equity           |
| CELU          | Celularity Inc.                                   | D                | Equity           |
| CENX          | CENTURY ALUMINUM COMPANY                          | D                | Equity           |
| CEP           | CANTOR EQUITY PARTNERS INC                        | D                | Equity           |
| CERS          | CERUS CORPORATION                                 | D                | Equity           |
| CERT          | CERTARA, INC.                                     | D                | Equity           |
| CEVA          | Ceva Inc  | D                | Equity           |
| CF            | CF INDUSTRIES HOLDINGS, INC.                      | D                | Equity           |
| CFG           | Citizens Financial Group, Inc.                    | D                | Equity           |
| CFLT          | CONFLUENT, INC.                                   | D                | Equity           |
| CFR           | CULLEN/FROST BANKERS INC.                         | D                | Equity           |
| CG            | The Carlyle Group LP                              | D                | Equity           |
| CGAU          | CENTERRA GOLD INC.                                | D                | Equity           |
| CGBD          | Carlyle Secured Lending, Inc.                     | D                | Equity           |
| CGC           | Canopy Growth Corporation                         | D                | Equity           |
| CGEM          | CULLINAN ONCOLOGY, INC.                           | D                | Equity           |
| CGEN          | Compugen Ltd.                                     | D                | Equity           |
| CGNT          | COGNYTE SOFTWARE LTD                              | D                | Equity           |
| CGNX          | COGNEX CORPORATION                                | D                | Equity           |
| CGON          | CYBIN, INC.                                       | D                | Equity           |
| CHAT          | TIDAL TRUST II ROUNDHILL GENERATIVE AI & TECH ETF | D                | ETF              |
| CHAU          | Direxion Dly CSI 300 Chn A Shr Br 2X ETF          | D                | ETF              |
| CHCT          | COMMUNITY HEALTHCARE TRUST INCORPORATED           | D                | Equity           |
| CHD           | CHURCH & DWIGHT CO.                               | D                | Equity           |
| CHDN          | Churchill Downs, Inc.                             | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                       | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| CHE           | Chemed Corporation  | D                | Equity           |
| CHEF          | Chefs' Warehouse Inc/The                                  | D                | Equity           |
| CHGG          | CHEGG, INC  | D                | Equity           |
| CHKP          | CHECK POINT SOFTWARE TECHNOLOGIES LTD.                    | D                | Equity           |
| CHMI          | CHERRY HILL MORTGAGE INVESTMENT CORP.                     | D                | Equity           |
| CHPT          | ChargePoint Holdings, Inc.                                | D                | Equity           |
| CHRD          | Chord Energy Corporation                                  | D                | Equity           |
| CHRS          | Coherus BioSciences, Inc.                                 | D                | Equity           |
| CHRW          | CH ROBINSON WORLDWIDE INC.                                | D                | Equity           |
| CHTR          | Charter Communications Inc. Cl A                          | D                | Equity           |
| CHWY          | Chewy, Inc.   | D                | Equity           |
| CHX           | ChampionX Corporation                                     | D                | Equity           |
| CI            | CIGNA CORPORATION   | D                | Equity           |
| CIA           | Citizens Inc.   | D                | Equity           |
| CIBR          | First Trust NASDAQ Cybersecurity ETF                      | D                | ETF              |
| CIEN          | CIENA CORPORATION   | D                | Equity           |
| CIFR          | Cipher Mining Inc.  | D                | Equity           |
| CIG           | Companhia Energetica de Minas Gerais - CEMIG (125)        | D                | Equity           |
| CIM           | CHIMERA INVESTMENT CORPORATION                            | D                | Equity           |
| CINF          | Cincinnati Financial Corp.                                | D                | Equity           |
| CIO           | City Office REIT, Inc.                                    | D                | Equity           |
| CIVI          | Civitas Resources, Inc                                    | D                | Equity           |
| CL            | COLGATE-PALMOLIVE COMPANY                                 | D                | Equity           |
| CLAR          | Clarus Corporation  | D                | Equity           |
| CLB           | Core Laboratories N.V.                                    | D                | Equity           |
| CLBR          | COLOMBIER ACQUISITION CORP II                             | D                | Equity           |
| CLBT          | Cellebrite DI Ltd.  | D                | Equity           |
| CLDX          | Celldex Therapeutics, Inc.                                | D                | Equity           |
| CLF           | CLIFFS NATURAL RESOURCES INC.                             | D                | Equity           |
| CLFD          | Clearfield, Inc.  | D                | Equity           |
| CLH           | CLEAN HARBORS INC   | D                | Equity           |
| CLLS          | Collectis S.A.  | D                | Equity           |
| CLMT          | Calumet Specialty Products Partners, L.P.                 | D                | Equity           |
| CLNE          | CLEAN ENERGY FUELS CORPORATION                            | D                | Equity           |
| CLOU          | Global X Cloud Computing ETF Global X Cloud Computing ETF | D                | ETF              |
| CLOV          | Clover Health Investments, Corporation                    | D                | Equity           |
| CLPR          | CLIPPER REALTY, INC.                                      | D                | Equity           |
| CLPT          | CLEARPOINT NEURO INC                                      | D                | Equity           |
| CLRB          | CELLECTAR BIOSCIENCES, INC.                               | D                | Equity           |
| CLS           | Celestica, Inc.   | D                | Equity           |
| CLSD          | Clearside Biomedical, Inc.                                | D                | Equity           |
| CLSK          | CleanSpark, Inc.  | D                | Equity           |
| CLVT          | Clarivate Plc   | D                | Equity           |
| CLW           | Clearwater Paper Corporation                              | D                | Equity           |
| CLX           | COLOROX CO  | D                | Equity           |
| CM            | Canadian Imperial Bank of Commerce                        | D                | Equity           |
| CMA           | COMERICA, INC.  | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                  | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--------------------------------------|------------------|------------------|
| CMBM          | CAMBIUM NETWORKS CORPORATION         | D                | Equity           |
| CMBT          | Euronav NV                           | D                | Equity           |
| CMC           | COMMERCIAL METALS COMPANY            | D                | Equity           |
| CMCM          | Cheetah Mobile Inc.                  | D                | Equity           |
| CMCSA         | COMCAST CORPORATION                  | D                | Equity           |
| CME           | CME GROUP INC.                       | D                | Equity           |
| CMG           | CHIPOTLE MEXICAN GRILL, INC.         | D                | Equity           |
| CMI           | CUMMINS INC.                         | D                | Equity           |
| CMP           | Compass Minerals International, Inc. | D                | Equity           |
| CMPO          | COMPOSECURE, INC. CLASS A            | D                | Equity           |
| CMPR          | CIMPRESS N.V.                        | D                | Equity           |
| CMPS          | COMPASS PATHWAYS PLC                 | D                | Equity           |
| CMPX          | COMPASS THERAPEUTICS, INC.           | D                | Equity           |
| CMRE          | Costamare Inc.                       | D                | Equity           |
| CMS           | CMS ENERGY CORPORATION               | D                | Equity           |
| CMTG          | CLAROS MORTGAGE TRUST, INC.          | D                | Equity           |
| CMTL          | COMTECH TELECOMMUNICATION            | D                | Equity           |
| CNA           | CNA FINANCIAL CORPORATION            | D                | Equity           |
| CNC           | CENTENE CORP                         | D                | Equity           |
| CNDT          | Conduent Incorporated                | D                | Equity           |
| CNH           | CNH Industrial N.V.                  | D                | Equity           |
| CNI           | CANADIAN NATIONAL RAILWAY            | D                | Equity           |
| CNK           | Cinemark Holdings, Inc.              | D                | Equity           |
| CNM           | CORE & MAIN INC                      | D                | Equity           |
| CNMD          | CONMED CORP.                         | D                | Equity           |
| CNNE          | Cannae Holdings, Inc.                | D                | Equity           |
| CNO           | CNO Financial Group, Inc.            | D                | Equity           |
| CNP           | CENTERPOINT ENERGY, INC.             | D                | Equity           |
| CNQ           | CANADIAN NATURAL RESOURCES LIMITED   | D                | Equity           |
| CNR           | Core Natural Resources, Inc.         | D                | Equity           |
| CNTA          | CENTESSA PHARMACEUTICALS PLC         | D                | Equity           |
| CNTY          | Century Casinos, Inc.                | D                | Equity           |
| CNX           | CNX Resources Corporation            | D                | Equity           |
| CNXC          | CONCENTRIX CORPORATION               | D                | Equity           |
| COCO          | VITA COCO COMPANY, INC.              | D                | Equity           |
| CODI          | Compass Diversified Holdings LLC     | D                | Equity           |
| CODX          | Co-Diagnostics, Inc.                 | D                | Equity           |
| COF           | CAPITAL ONE FINANCIAL CORPORATION    | D                | Equity           |
| COGT          | COGENT BIOSCIENCES, INC.             | D                | Equity           |
| COHR          | Coherent Corporation                 | D                | Equity           |
| COHU          | Cohu, Inc.                           | D                | Equity           |
| COIN          | Coinbase Global, Inc.                | D                | Equity           |
| COLB          | Columbia Banking System, Inc.        | D                | Equity           |
| COLD          | Americold Realty Trust               | D                | Equity           |
| COLM          | COLUMBIA SPORTWEAR CO.               | D                | Equity           |
| COMM          | COMMSCOPE HOLDING CO, INC.           | D                | Equity           |
| COMP          | COMPASS INC                          | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>  | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| CONL          | GraniteShares ETF Trust GraniteShares 2x Long COIN                         | D                | ETF              |
| CONY          | YIELDMAX COIN OPTION INCOME STRATEGY ETF                                   | D                | ETF              |
| COO           | Cooper Companies, Inc.   | D                | Equity           |
| COOK          | TRAEGER, INC.  | D                | Equity           |
| COOP          | Mr. Cooper Group Inc.  | D                | Equity           |
| COP           | CONOCOPHILLIPS   | D                | Equity           |
| COPX          | GLOBAL X COPPER MINERS ETF   | D                | ETF              |
| COR           | Cencora, Inc.  | D                | Equity           |
| CORN          | TEUCRIUM COMMODITY TRUST CORN FUND SHARES ETF                              | D                | ETF              |
| CORT          | Corcept Therapeutics Incorporated  | D                | Equity           |
| CORZ          | CORE SCIENTIFIC, INC   | D                | Equity           |
| COSM          | COSMOS HOLDINGS INC.   | D                | Equity           |
| COST          | COSTCO WHOLESALE CORPORATION   | D                | Equity           |
| COTY          | COTY INC.  | D                | Equity           |
| COUR          | COURSERA, INC.   | D                | Equity           |
| CP            | Canadian Pacific Railway Limited   | D                | Equity           |
| CPA           | Copa Holdings SA   | D                | Equity           |
| CPAY          | Corpay, Inc.   | D                | Equity           |
| CPB           | CAMPBELL SOUP CO   | D                | Equity           |
| CPER          | UNITED STATES COPPER INDEX FUND  | D                | ETF              |
| CPIX          | CUMBERLAND PHARMACEUTICALS INC.  | D                | Equity           |
| CPNG          | COUPANG INC  | D                | Equity           |
| CPRI          | Capri Holdings Limited   | D                | Equity           |
| CPRT          | COPART INC   | D                | Equity           |
| CPRX          | CATALYST PHARMACEUTICAL PARTNES INC.                                       | D                | Equity           |
| CPS           | Cooper-Standard Holdings Inc.  | D                | Equity           |
| CPSH          | CPS TECHNOLOGIES CORPORATION   | D                | Equity           |
| CPT           | Camden Property Trust  | D                | Equity           |
| CQP           | Cheniere Energy Ptnrs L.P.   | D                | Equity           |
| CR            | Crane Co.  | D                | Equity           |
| CRBG          | COREBRIDGE FINANCIAL INC   | D                | Equity           |
| CRBP          | CORBUS PHARMACEUTICALS HOLDINGS, INC.                                      | D                | Equity           |
| CRBU          | CARIBOU BIOSCIENCES, INC.  | D                | Equity           |
| CRC           | CALIFORNIA RESOURCES CORP  | D                | Equity           |
| CRCT          | CRICUT, INC.   | D                | Equity           |
| CRDF          | Cardiff Oncology, Inc.   | D                | Equity           |
| CRDL          | CARDIOL THERAPEUTICS INC.  | D                | Equity           |
| CRDO          | CREDO TECHNOLOGY GROUP HOLDING LTD.  | D                | Equity           |
| CRESY         | Cresud Sociedad Anonima Comercial, Inmobiliaria, Financiera y Agropecuaria | D                | Equity           |
| CRGX          | CARGO THERAPEUTICS, INC.   | D                | Equity           |
| CRGY          | CRESCENT ENERGY COMPANY  | D                | Equity           |
| CRH           | CRH plc  | D                | Equity           |
| CRI           | CARTER'S , INC.  | D                | Equity           |
| CRK           | COMSTOCK RESOURCES INC.  | D                | Equity           |
| CRL           | Charles River Laboratories International, Inc.                             | D                | Equity           |
| CRM           | SALESFORCE.COM, INC  | D                | Equity           |
| CRMD          | CorMedix Inc.  | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                        | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| CRNC          | Cerence Inc.                               | D                | Equity           |
| CRNT          | Ceragon Networks Ltd.                      | D                | Equity           |
| CRNX          | CRINETICS PHARMACEUTICALS INC              | D                | Equity           |
| CRON          | Cronos Group Inc.                          | D                | Equity           |
| CROX          | CROCS, INC.                                | D                | Equity           |
| CRS           | CARPENTER TECHNOLOGY CORP.                 | D                | Equity           |
| CRSP          | CRISPR Therapeutics AG                     | D                | Equity           |
| CRSR          | CORSAIR GAMING, INC.                       | D                | Equity           |
| CRTO          | CRITEO SA                                  | D                | Equity           |
| CRUS          | CIRRUS LOGIC INC.                          | D                | Equity           |
| CRVS          | Corvus Pharmaceuticals, Inc.               | D                | Equity           |
| CRWD          | CrowdStrike Holdings, Inc.                 | D                | Equity           |
| CRWV          | CoreWeave, Inc.                            | D                | Equity           |
| CSCO          | CISCO SYSTEMS, INC.                        | D                | Equity           |
| CSGP          | LoopNet, Inc. (Merger)                     | D                | Equity           |
| CSIQ          | Canadian Solar Inc                         | D                | Equity           |
| CSL           | Carlisle Companies Incorporated            | D                | Equity           |
| CSTE          | CAESARSTONE SDOT-YAM LTD.                  | D                | Equity           |
| CSTL          | CASTLE BIOSCIENCES, INC.                   | D                | Equity           |
| CSTM          | CONSTELLIUM N.V                            | D                | Equity           |
| CSV           | Carriage Services, Inc.                    | D                | Equity           |
| CSWC          | Capital Southwest Corp                     | D                | Equity           |
| CSX           | CSX CORPORATION                            | D                | Equity           |
| CTAS          | CINTAS CORP.                               | D                | Equity           |
| CTLP          | Cantaloupe, Inc.                           | D                | Equity           |
| CTMX          | CytomX Therapeutics, Inc.                  | D                | Equity           |
| CTOS          | Custom Truck One Source, Inc.              | D                | Equity           |
| CTRA          | Coterra Energy Inc.                        | D                | Equity           |
| CTRM          | CASTOR MARITIME, INC.                      | D                | Equity           |
| CTRN          | Citi Trends, Inc.                          | D                | Equity           |
| CTSH          | COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION | D                | Equity           |
| CTSO          | CYTOSORBENTS CORPORATION                   | D                | Equity           |
| CTVA          | Corteva, Inc.                              | D                | Equity           |
| CTXR          | CITIUS PHARMACEUTICALS INC                 | D                | Equity           |
| CUBE          | CubeSmart                                  | D                | Equity           |
| CUBI          | Customers Bancorp, Inc Common Stock        | D                | Equity           |
| CUE           | CUE BIOPHARMA INC                          | D                | Equity           |
| CUK           | Carnival Corporation & Plc                 | D                | Equity           |
| CULP          | Culp, Inc.                                 | D                | Equity           |
| CURE          | Direxion Daily Healthcare Bull 3X ETF      | D                | ETF              |
| CURI          | CURIOSITYSTREAM INC                        | D                | Equity           |
| CURV          | TORRID HOLDINGS INC.                       | D                | Equity           |
| CVAC          | CUREVAC N.V.                               | D                | Equity           |
| CVE           | Cenovus Energy Inc.                        | D                | Equity           |
| CVGI          | Commercial Vehicle Group, Inc.             | D                | Equity           |
| CVGW          | CALAVO GROWERS INC.                        | D                | Equity           |
| CVI           | CVR Energy, Inc.                           | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>  | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| CVLG          | Covenant Logistics Group, Inc.   | D                | Equity           |
| CVLT          | Commvault Systems Inc  | D                | Equity           |
| CVNA          | Carvana Co.  | D                | Equity           |
| CVRX          | CVRX, INC.   | D                | Equity           |
| CVS           | CVS CAREMARK CORPORATION   | D                | Equity           |
| CVX           | CHEVRON CORPORATION  | D                | Equity           |
| CWAN          | CLEARWATER ANALYTICS HOLDINGS  | D                | Equity           |
| CWB           | SPDR Barclays Convertible Secs ETF   | D                | ETF              |
| CWEB          | Direxion Shares ETF Trust - Direxion Daily CSI China Internet Index Bull 2X Shar | D                | ETF              |
| CWEN          | Clearway Energy, Inc.  | D                | Equity           |
| CWH           | Camping World Holdings, Inc.   | D                | Equity           |
| CWK           | Cushman Wakefield Plc  | D                | Equity           |
| CWST          | Casella Waste Systems Inc.   | D                | Equity           |
| CX            | CEMEX, S.A.B. DE C.V.  | D                | Equity           |
| CXAI          | CXApp Inc.   | D                | Equity           |
| CXDO          | CREXENDO, INC.   | D                | Equity           |
| CXM           | SPRINKLR, INC.   | D                | Equity           |
| CXW           | CORRECTIONS CORPORATION OF AMERICA   | D                | Equity           |
| CYBN          | CYBIN, INC.  | D                | Equity           |
| CYBR          | CYBERARK SOFTWARE, LTD.  | D                | Equity           |
| CYD           | China Yuchai International Limited   | D                | Equity           |
| CYH           | COMMUNITY HEALTH SYSTEMS, INC.   | D                | Equity           |
| CYRX          | CryoPort, Inc  | D                | Equity           |
| CYTK          | CYTOKINETICS, INCORPORATED   | D                | Equity           |
| CZR           | Caesars Entertainment Corporation  | D                | Equity           |
| D             | DOMINION RESOURCES   | D                | Equity           |
| DAC           | DANAOS CORPORATION   | D                | Equity           |
| DADA          | DADA NEXUS LTD.  | D                | Equity           |
| DAKT          | DAKTRONICS INC.  | D                | Equity           |
| DAL           | DELTA AIR LINES INC.   | D                | Equity           |
| DAN           | Dana Holding Corporation   | D                | Equity           |
| DAO           | YOUDAO INC   | D                | Equity           |
| DAPP          | VanEck Digital Transformation ETF  | D                | ETF              |
| DAR           | Darling International, Inc.  | D                | Equity           |
| DASH          | DoorDash, Inc.   | D                | Equity           |
| DAVA          | ENDAVA PLC   | D                | Equity           |
| DAVE          | Dave Inc.  | D                | Equity           |
| DAWN          | DAY ONE BIOPHARMACEUTICALS, INC.   | D                | Equity           |
| DAY           | Dayforce, Inc.   | D                | Equity           |
| DB            | DEUTSCHE BANK AG   | D                | Equity           |
| DBA           | POWERSHARES DB AGRICULTURE   | D                | ETF              |
| DBB           | PowerShares DB Base Metals ETF   | D                | ETF              |
| DBC           | PoweShares DB Commodity Index Tracking Fund                                      | D                | ETF              |
| DBI           | Designer Brands Inc. (   | D                | Equity           |
| DBO           | PowerShares DB Oil Fund  | D                | ETF              |
| DBRG          | DigitalBridge Group, Inc.  | D                | Equity           |
| DBX           | Dropbox, Inc.  | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>  | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| DCGO          | DOCGO INC  | D                | Equity           |
| DCI           | Donaldson Company, Inc.  | D                | Equity           |
| DCOM          | Dime Community Bancshares, Inc.  | D                | Equity           |
| DCTH          | DELCATH SYSTEM INC   | D                | Equity           |
| DD            | DuPont de Nemours, Inc.  | D                | Equity           |
| DDD           | 3D SYSTEMS CORPORATION   | D                | Equity           |
| DDM           | ProShares Ultra Dow30  | D                | ETF              |
| DDOG          | Datadog Inc  | D                | Equity           |
| DE            | DEERE & COMPANY  | D                | Equity           |
| DECK          | DECKERS OUTDOOR CORPORATION  | D                | Equity           |
| DEI           | Douglas Emmett Inc   | D                | Equity           |
| DELL          | Dell Technologies, Inc.  | D                | Equity           |
| DENN          | Denny's Corp.  | D                | Equity           |
| DEO           | DIAGEO PLC   | D                | Equity           |
| DFEN          | Direxion Daily Aerospace & Defense Bull 3X Shares Direxion Daily Aerospace | D                | ETF              |
| DFH           | DREAM FINDERS HOMES, INC.  | D                | Equity           |
| DG            | DOLLAR GENERAL CORPORATION   | D                | Equity           |
| DGRO          | iShares Core Dividend Growth ETF   | D                | Equity           |
| DGX           | QUEST DIAGNOSTICS INC  | D                | Equity           |
| DH            | DEFINITIVE HEALTHCARE CORP.  | D                | Equity           |
| DHC           | Diversified Healthcare Trust (   | D                | Equity           |
| DHI           | DR HORTON INC.   | D                | Equity           |
| DHR           | DANAHER CORPORATION  | D                | Equity           |
| DHT           | DHT Holdings, Inc.   | D                | Equity           |
| DHX           | DHI Group, Inc.  | D                | Equity           |
| DIA           | SPDR DOW JONES INDUSTRIAL AVERAGE  | D                | ETF              |
| DIBS          | 1STDIBS.COM, INC.  | D                | Equity           |
| DIG           | ProShares Ultra Oil & Gas  | D                | ETF              |
| DIN           | DineEquity, Inc  | D                | Equity           |
| DINO          | HF Sinclair Corporation  | D                | Equity           |
| DIOD          | Diodes Incorporated  | D                | Equity           |
| DIS           | THE WALT DISNEY COMPANY  | D                | Equity           |
| DIVO          | AMPLIFY CWP ENHANCED DIVIDEND INCOME ETF                                   | D                | ETF              |
| DJP           | iPath DJ-UBS Commodity Indx Tot Ret ETN                                    | D                | ETF              |
| DJT           | Trump Media & Technology Group Corp.                                       | D                | Equity           |
| DK            | Delek US Holdings, Inc.  | D                | Equity           |
| DKL           | Delek Logistics Partners LP  | D                | Equity           |
| DKNG          | DraftKings Inc.  | D                | Equity           |
| DKS           | DICK'S SPORTING GOODS INC.   | D                | Equity           |
| DLB           | DOLBY LABORATORIES, INC.   | D                | Equity           |
| DLHC          | DLH HOLDINGS CORP.   | D                | Equity           |
| DLNG          | Dynagas LNG Partners LP  | D                | Equity           |
| DLO           | DLOCAL, LTD  | D                | Equity           |
| DLR           | Digital Realty Trust Inc   | D                | Equity           |
| DLTH          | Duluth Holdings Inc.   | D                | Equity           |
| DLTR          | DOLLAR TREE, INC.  | D                | Equity           |
| DLX           | DELUXE CORPORATION   | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>  | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| DMLP          | Dorchester Minerals LP   | D                | Equity           |
| DMRC          | Digimarc Corporation   | D                | Equity           |
| DNA           | Ginkgo Bioworks Holdings, Inc. (   | D                | Equity           |
| DNB           | Dun & Bradstreet Holdings, Inc.  | D                | Equity           |
| DNLI          | Denali Therapeutics Inc  | D                | Equity           |
| DNN           | Denison Mines Corp.  | D                | Equity           |
| DNOW          | NOW, INC.  | D                | Equity           |
| DNUT          | KRISPY KREME, INC  | D                | Equity           |
| DOC           | Physicians Realty Trust  | D                | Equity           |
| DOCN          | DIGITALOCEAN HOLDINGS, INC.  | D                | Equity           |
| DOCS          | DOXIMITY, INC  | D                | Equity           |
| DOCU          | DocuSign Inc.  | D                | Equity           |
| DOG           | ProShares Short Dow30  | D                | ETF              |
| DOLE          | DOLE PLS   | D                | Equity           |
| DOMO          | Domo, Inc.   | D                | Equity           |
| DOOO          | BRP, INC.  | D                | Equity           |
| DOUG          | DOUGLAS ELLIMAN INC.   | D                | Equity           |
| DOV           | DOVER CORPORATION  | D                | Equity           |
| DOW           | Dow Inc.   | D                | Equity           |
| DOX           | AMDOCS LTD   | D                | Equity           |
| DPST          | Direxion Shares ETF Trust - Direxion Daily Regional Banks Bull 3X Shares | D                | ETF              |
| DPZ           | DOMINO'S PIZZA INC   | D                | Equity           |
| DQ            | Daqo New Energy Corp   | D                | Equity           |
| DRD           | DRDGOLD Ltd.   | D                | Equity           |
| DRI           | DARDEN RESTAURANTS, INC.   | D                | Equity           |
| DRIO          | DARIOHEALTH CORP   | D                | Equity           |
| DRIP          | Direxion Dly S&P Oil&Gs Ex&Prd Br 3X ETF                                 | D                | ETF              |
| DRN           | Direxion Daily Real Estate Bull 3x ETF                                   | D                | ETF              |
| DRS           | Leonardo DRS, Inc.   | D                | Equity           |
| DRV           | Direxion Daily Real Estate Bear 3x ETF                                   | D                | ETF              |
| DRVN          | DRIVEN BRANDS HOLDINGS INC   | D                | Equity           |
| DSGX          | DESCARTES SYSTEM GROUP INC   | D                | Equity           |
| DSP           | VIANTECHNOLOGY, INC.   | D                | Equity           |
| DSX           | DIANA SHIPPING INC   | D                | Equity           |
| DT            | Dynatrace Inc  | D                | Equity           |
| DTE           | DTE Energy Company   | D                | Equity           |
| DTM           | DT Midstream, Inc.   | D                | Equity           |
| DUK           | DUKE ENERGY CORPORATION  | D                | Equity           |
| DUOL          | DUOLINGO, INC.   | D                | Equity           |
| DUST          | Direxion Daily Gold Miners Bear 3X Shares                                | D                | ETF              |
| DV            | DOUBLEVERIFY HOLDINGS INC  | D                | Equity           |
| DVA           | DaVita HealthCare Partners Inc.  | D                | Equity           |
| DVAX          | DYNAVAX TECHNOLOGIES CORPORATION   | D                | Equity           |
| DVN           | DEVON ENERGY CORPORATION   | D                | Equity           |
| DVY           | ISHARES DJ SELECT DIVIDEND   | D                | ETF              |
| DX            | Dynex Capital, Inc.  | D                | Equity           |
| DXC           | DXC Technology Company   | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| DXCM          | DexCom, Inc.                                       | D                | Equity           |
| DXD           | ProShares UltraShort Dow30 (25 Shares)             | D                | ETF              |
| DXJ           | WISDOMTREE JAPAN HEDGED EQUITY FUND                | D                | ETF              |
| DXLG          | DESTINATION XL GROUP, INC.                         | D                | Equity           |
| DXPE          | DXP Enterprises, Inc.                              | D                | Equity           |
| DY            | DYCOM INDUSTRIES INC.                              | D                | Equity           |
| DYAI          | DYADIC INTERNATIONAL, INC.                         | D                | Equity           |
| DYN           | DYNE THERAPEUTICS INC                              | D                | Equity           |
| E             | ENI SpA  | D                | Equity           |
| EA            | ELECTRONIC ARTS INC.                               | D                | Equity           |
| EAF           | GrafTech International Ltd.                        | D                | Equity           |
| EAT           | BRINKER INT'L, INC.                                | D                | Equity           |
| EB            | Eventbrite, Inc.                                   | D                | Equity           |
| EBAY          | EBAY INC.  | D                | Equity           |
| EBC           | EASTERN BANKSHARES, INC.                           | D                | Equity           |
| EBS           | Emergent Biosolutions, Inc.                        | D                | Equity           |
| EC            | Ecopetrol SA                                       | D                | Equity           |
| ECH           | iShares MSCI Chile ETF                             | D                | ETF              |
| ECL           | ECOLAB INC.  | D                | Equity           |
| ECPG          | Encore Capital Group Inc                           | D                | Equity           |
| ECVT          | Ecovyst Inc.                                       | D                | Equity           |
| ED            | CON EDISON   | D                | Equity           |
| EDAP          | EDAP TMS S.A.                                      | D                | Equity           |
| EDC           | Direxion Daily Emerging Markets Bull 3X Shares (20 | D                | ETF              |
| EDIT          | Editas Medicine, Inc.                              | D                | Equity           |
| EDU           | NEW ORIENTAL EDUCATION & TECHNOLOGY GROUP          | D                | Equity           |
| EDV           | VANGUARD EXTENDED DURATION TREASURY ETF            | D                | ETF              |
| EDZ           | Direxion Daily Emerging Markets Bear 3X Share      | D                | ETF              |
| EE            | EXCELERATE ENERGY, INC.                            | D                | Equity           |
| EEFT          | EURONET WORLDWIDE, INC.                            | D                | Equity           |
| EEM           | ISHARES MSCI EMERGING MARKETS INDEX                | D                | ETF              |
| EETH          | PROSHARES ETHER STRATEGY ETF                       | D                | ETF              |
| EEV           | ProShares UltraShort MSCI Emerging Mkts            | D                | ETF              |
| EFA           | ISHARES MSCI EAFE INDEX                            | D                | ETF              |
| EFC           | Ellington Financial LLC                            | D                | Equity           |
| EFX           | EQUIFAX INC.                                       | D                | Equity           |
| EG            | Everest Group, Ltd.                                | D                | Equity           |
| EGBN          | Eagle Bancorp Inc                                  | D                | Equity           |
| EGHT          | 8x8 Inc  | D                | Equity           |
| EGO           | ELDORADO GOLD CORPORATION                          | D                | Equity           |
| EGY           | VAALCO ENERGY INC                                  | D                | Equity           |
| EH            | EHANG HOLDINGS LTD. SPONSORED ADR                  | D                | Equity           |
| EHAB          | Enhabit, Inc.                                      | D                | Equity           |
| EHC           | Encompass Health Corporation                       | D                | Equity           |
| EHTH          | eHealth, Inc.                                      | D                | Equity           |
| EIX           | EDISON INTERNATIONAL                               | D                | Equity           |
| EL            | The Estée Lauder Companies Inc.                    | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                   | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| ELAN          | Elanco Animal Health Incorporated                     | D                | Equity           |
| ELDN          | ELEDON PHARMACEUTICALS, INC.                          | D                | Equity           |
| ELF           | e.l.f. Beauty, Inc.                                   | D                | Equity           |
| ELME          | Elme Communities                                      | D                | Equity           |
| ELS           | Equity Lifestyle Properties, Inc.                     | D                | Equity           |
| ELV           | Elevance Health, Inc                                  | D                | Equity           |
| EMB           | iShares J.P. Morgan USD Emerging Markets Bond ETF     | D                | ETF              |
| EMBC          | EMBECTA CORP.   | D                | Equity           |
| EME           | EMCOR GROUP INC                                       | D                | Equity           |
| EMLC          | VanEck Vectors J.P. Morgan EM Local Currency Bond ETF | D                | ETF              |
| EMN           | EASTMAN CHEMICAL COMPANY                              | D                | Equity           |
| EMR           | EMERSON ELECTRIC COMPANY                              | D                | Equity           |
| EMX           | EMX ROYALTY CORP                                      | D                | Equity           |
| ENB           | Enbridge Inc  | D                | Equity           |
| ENLV          | ENLIVEX THERAPEUTICS LTD.                             | D                | Equity           |
| ENOV          | Enovis Corporation                                    | D                | Equity           |
| ENPH          | Enphase Energy Inc.                                   | D                | Equity           |
| ENR           | Energizer Holdings, Inc.                              | D                | Equity           |
| ENS           | Enersys   | D                | Equity           |
| ENSG          | Ensign Group, Inc.                                    | D                | Equity           |
| ENTA          | Enanta Pharmaceuticals, Inc.                          | D                | Equity           |
| ENTG          | Entegris, Inc.  | D                | Equity           |
| ENTX          | ENTERA BIO LTD.                                       | D                | Equity           |
| ENVA          | Enova International, Inc.                             | D                | Equity           |
| ENVX          | Enovix Corporation                                    | D                | Equity           |
| EOG           | EOG RESOURCES, INC.                                   | D                | Equity           |
| EOLS          | Evolus, Inc.  | D                | Equity           |
| EOSE          | Eos Energy Enterprises, Inc.                          | D                | Equity           |
| EPAM          | EPAM Systems, Inc.                                    | D                | Equity           |
| EPC           | Edgewell Personal Care Company                        | D                | Equity           |
| EPD           | ENTERPRISE PRODUCTS PARTNERS L.P.                     | D                | Equity           |
| EPI           | WisdomTree India Earning Fund                         | D                | ETF              |
| EPIX          | ESSA PHARMA INC                                       | D                | Equity           |
| EPM           | Evolution Petroleum Corporation                       | D                | Equity           |
| EPR           | EPR Properties  | D                | Equity           |
| EPRT          | Essential Properties Realty Trust Inc                 | D                | Equity           |
| EPV           | ProShares UltraShort FTSE Europe                      | D                | ETF              |
| EQH           | AXA Equitable Holdings, Inc.                          | D                | Equity           |
| EQIX          | EQUINIX, INC.   | D                | Equity           |
| EQNR          | Equinor ASA   | D                | Equity           |
| EQR           | EQUITY RESIDENTIAL                                    | D                | Equity           |
| EQT           | EQT Corporation                                       | D                | Equity           |
| EQX           | Equinox Gold Corp.                                    | D                | Equity           |
| ERAS          | ERASCA, INC.  | D                | Equity           |
| ERIC          | Ericsson  | D                | Equity           |
| ERIE          | Erie Indemnity Company Cl A                           | D                | Equity           |
| ERII          | Energy Recovery Inc.                                  | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                        | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| ERJ           | Embraer S.A.                               | D                | Equity           |
| ERO           | ERO COPPER CORP.                           | D                | Equity           |
| ERX           | DIREXION DAILY ENERGY BULL 3X SHARES       | D                | ETF              |
| ERY           | Direxionshares Daily Energy Bear 3X Shares | D                | ETF              |
| ES            | Eversource Energy                          | D                | Equity           |
| ESI           | Element Solutions Inc.                     | D                | Equity           |
| ESLT          | ELBIT SYSTEMS LTD.                         | D                | Equity           |
| ESPR          | Esperion Therapeutics, Inc.                | D                | Equity           |
| ESRT          | Empire State Realty Trust, Inc.            | D                | Equity           |
| ESS           | Essex Property Trust Inc.                  | D                | Equity           |
| ESTA          | ESTABLISHMENT LABS HOLDINGS, INC.          | D                | Equity           |
| ESTC          | Elastic N.V.                               | D                | Equity           |
| ET            | Energy Transfer LP                         | D                | Equity           |
| ETD           | Ethan Allen Interiors Inc.                 | D                | Equity           |
| ETH           | Grayscale Ethereum Mini Trust ETF          | D                | ETF              |
| ETHA          | iShares Ethereum Trust                     | D                | ETF              |
| ETHE          | Grayscale Ethereum Trust ETF               | D                | ETF              |
| ETHT          | PROSHARES ULTRA ETHER ETF                  | D                | ETF              |
| ETHU          | 2X ETHER ETF                               | D                | ETF              |
| ETHW          | Bitwise Ethereum ETF                       | D                | ETF              |
| ETN           | EATON CORPORATION PLC                      | D                | Equity           |
| ETNB          | 89BIO INC                                  | D                | Equity           |
| ETON          | ETON PHARMACEUTICALS, INC                  | D                | Equity           |
| ETOR          | eToro Group Ltd.                           | D                | Equity           |
| ETR           | ENERGY CORPORATION                         | D                | Equity           |
| ETSY          | Etsy, Inc.                                 | D                | Equity           |
| ETWO          | E2open Parent Holdings, Inc.               | D                | Equity           |
| EU            | ENCORE ENERGY CORP.                        | D                | Equity           |
| EUFN          | iShares MSCI Europe Financials ETF         | D                | ETF              |
| EUO           | PROSHARES ULTRASHORT EURO                  | D                | ETF              |
| EVC           | Entravision Communications Corporation     | D                | Equity           |
| EVER          | EverQuote Inc                              | D                | Equity           |
| EVEX          | Eve Holding, Inc                           | D                | Equity           |
| EVGO          | EVgo Inc.                                  | D                | Equity           |
| EVH           | Evolent Health, Inc.                       | D                | Equity           |
| EVLV          | Evolv Technologies Holdings, Inc.          | D                | Equity           |
| EVR           | Evercore Partners Inc.                     | D                | Equity           |
| EVRG          | Evergy, Inc.                               | D                | Equity           |
| EVRI          | Everi Holdings Inc.                        | D                | Equity           |
| EW            | EDWARDS LIFESCIENCES CORP.                 | D                | Equity           |
| EWA           | ISHARES MSCI AUSTRALIA INDEX               | D                | ETF              |
| EWBC          | EAST WEST BANCORP INC                      | D                | Equity           |
| EWC           | iShares Canada Index ETF                   | D                | ETF              |
| EW CZ         | EUROPEAN WAX CENTER, INC.                  | D                | Equity           |
| EWG           | iShares MSCI Germany Index Fund ETF        | D                | ETF              |
| EW H          | ISHARES MSCI HONG KONG INDEX               | D                | ETF              |
| EW I          | iShares MSCI Italy Index Fund              | D                | ETF              |

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| <b>Symbol</b> | <b>Company Name</b>                            | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| EWJ           | ISHARES MSCI JAPAN INDEX                       | D                | ETF              |
| EWM           | ISHARES MSCI MALAYSIA INDEX ETF                | D                | ETF              |
| EWP           | iShares MSCI Spain Capped                      | D                | ETF              |
| EWQ           | iShares MSCI France                            | D                | ETF              |
| EWS           | iShares MSCI Singapore                         | D                | ETF              |
| EWT           | ISHARES TAIWAN INDEX ETF                       | D                | ETF              |
| EWTX          | EDGEWISE THERAPEUTICS, INC.                    | D                | Equity           |
| EWU           | iShares MSCI United Kingdom Index ETF          | D                | ETF              |
| EWV           | ISHARES MSCI MEXICO CAPPED ETF                 | D                | ETF              |
| EWY           | ISHARES MSCI SOUTH KOREA CAPPED INDEX          | D                | ETF              |
| EWZ           | ISHARES MSCI BRAZIL CAPPED INDEX               | D                | ETF              |
| EXAS          | Exact Sciences Corp.                           | D                | Equity           |
| EXC           | EXELON CORPORATION                             | D                | Equity           |
| EXE           | Expand Energy Corporation                      | D                | Equity           |
| EXEL          | EXELIXIS, INC.                                 | D                | Equity           |
| EXFY          | EXPENSIFY, INC.                                | D                | Equity           |
| EXK           | Endeavour Silver Corp.                         | D                | Equity           |
| EXLS          | ExlService Holdings, Inc.                      | D                | Equity           |
| EXP           | EAGLE MATERIALS INC.                           | D                | Equity           |
| EXPD          | EXPEDITORS INTERNATIONAL                       | D                | Equity           |
| EXPE          | EXPEDIA INC.                                   | D                | Equity           |
| EXPI          | eXp World Holdings, Inc.                       | D                | Equity           |
| EXR           | Extra Space Storage Inc.                       | D                | Equity           |
| EXTR          | EXTREME METWORKS, INC.                         | D                | Equity           |
| EYE           | National Vision Holdings, Inc.                 | D                | Equity           |
| EYPT          | EyePoint Pharmaceuticals, Inc.                 | D                | Equity           |
| EZA           | iShares MSCI South Africa Index                | D                | ETF              |
| EZPW          | EZCORP, INC                                    | D                | Equity           |
| EZU           | iShares MSCI Eurozone                          | D                | ETF              |
| F             | FORD MOTOR COMPANY                             | D                | Equity           |
| FAF           | First American Financial Corporation           | D                | Equity           |
| FAN           | FIRST TRUST GLOBAL WIND ENERGY ETF             | D                | ETF              |
| FANG          | DIAMONDBACK ENERGY, INC.                       | D                | Equity           |
| FARM          | FARMER BROS. CO.                               | D                | Equity           |
| FARO          | FARO TECHNOLOGIES                              | D                | Equity           |
| FAS           | DIREXION DAILY FINANCIAL BULL 3X SHARES        | D                | ETF              |
| FAST          | FASTENAL COMPANY                               | D                | Equity           |
| FATE          | Fate Therapeutics, Inc.                        | D                | Equity           |
| FAZ           | DIREXION DAILY FINANCIAL BEAR 3X SHARES        | D                | ETF              |
| FBIN          | Fortune Brands Innovations, Inc.               | D                | Equity           |
| FBIO          | FORTRESS BIOTECH, INC.                         | D                | Equity           |
| FBL           | GraniteShares ETF Trust 2x Long META Daily ETF | D                | ETF              |
| FBTC          | Fidelity Wise Origin Bitcoin Fund              | D                | ETF              |
| FC            | Franklin Covey Co.                             | D                | Equity           |
| FCEL          | FUELCELL ENERGY, INC.                          | D                | Equity           |
| FCFS          | FirstCash Holdings, Inc.                       | D                | Equity           |
| FCG           | First Trust ISE-Revere Natural Gas ETF         | D                | ETF              |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                          | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| FCN           | FTI CONSULTING, INC.                         | D                | Equity           |
| FCNCA         | FIRST CITIZENS BANCSHARES, INC.              | D                | Equity           |
| FCX           | FREEMPORT-MCMORAN COPPER & GOLD INC.         | D                | Equity           |
| FDMT          | 4D MOLECULAR THERAPEUTICS, INC.              | D                | Equity           |
| FDN           | First Trust Dow Jones Internet ETF           | D                | ETF              |
| FDP           | Fresh Del Monte Produce Inc.                 | D                | Equity           |
| FDS           | FACTSET RESEARCH SYSTEMS                     | D                | Equity           |
| FDUS          | Fidus Investment Corporation                 | D                | Equity           |
| FDX           | FEDEX CORPORATION                            | D                | Equity           |
| FE            | FIRSTENERGY CORP.                            | D                | Equity           |
| FENY          | Fidelity MSCI Energy Index ETF               | D                | ETF              |
| FERG          | FERGUSON PLC                                 | D                | Equity           |
| FETH          | Fidelity Ethereum Fund                       | D                | ETF              |
| FEZ           | SPDR EURO STOXX 50 ETF                       | D                | ETF              |
| FF            | FutureFuel Corp                              | D                | Equity           |
| FFAI          | Faraday Future Intelligent Electric Inc.     | D                | Equity           |
| FFIV          | F5 NETWORKS, INC.                            | D                | Equity           |
| FFWM          | FIRST FOUNDATION, INC.                       | D                | Equity           |
| FGEN          | FibroGen, Inc.                               | D                | Equity           |
| FHN           | FIRST HORIZON NATIONAL CORPORATION           | D                | Equity           |
| FI            | Fiserv, Inc                                  | D                | Equity           |
| FICO          | FAIR ISAAC CORPORATION                       | D                | Equity           |
| FIGS          | FIGS, INC.                                   | D                | Equity           |
| FINV          | FinVolution Group                            | D                | Equity           |
| FINX          | GLOBAL X FINTECH ETF                         | D                | ETF              |
| FIP           | FTAI INFRASTRUCTURE INC.                     | D                | Equity           |
| FIS           | Fidelity National Information Services, Inc. | D                | Equity           |
| FITB          | FIFTH THIRD BANCORP                          | D                | Equity           |
| FIVE          | Five Below Inc                               | D                | Equity           |
| FIVN          | Five9, Inc.                                  | D                | Equity           |
| FIX           | Comfort Systems USA Inc.                     | D                | Equity           |
| FIZZ          | National Beverage Corp                       | D                | Equity           |
| FKWL          | FRANKLIN WIRELESS CORP.                      | D                | Equity           |
| FL            | FOOT LOCKER, INC.                            | D                | Equity           |
| FLEX          | Flex Ltd.                                    | D                | Equity           |
| FLG           | Flagstar Financial, Inc.                     | D                | Equity           |
| FLGT          | Fulgent Genetics, Inc.                       | D                | Equity           |
| FLL           | FULL HOUSE RESORTS, INC.                     | D                | Equity           |
| FLNC          | FLUENCE ENERGY, INC.                         | D                | Equity           |
| FLNG          | FLEX LNG LTD                                 | D                | Equity           |
| FLO           | FLOWERS FOODS, INC.                          | D                | Equity           |
| FLR           | FLUOR CORPORATION                            | D                | Equity           |
| FLS           | Flowserve Corp.                              | D                | Equity           |
| FLUT          | FLUTTER ENTERTAINMENT PLC                    | D                | Equity           |
| FLUX          | FLUX POWER HOLDINGS, INC                     | D                | Equity           |
| FLWS          | 1-800-Flowers.com Inc.                       | D                | Equity           |
| FLYW          | FLYWIRE CORPORATION                          | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                                      | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| FMC           | FMC CORPORATION  | D                | Equity           |
| FMNB          | Farmers National Banc Corp.                              | D                | Equity           |
| FMS           | Fresenius Medical Care AG & Co KGaA                      | D                | Equity           |
| FMX           | Fomento Economico Mexicano, S.A.B. de C.V.               | D                | Equity           |
| FN            | Fabrinet   | D                | Equity           |
| FNB           | F N B Corp. PA   | D                | Equity           |
| FND           | Floor & Decor Holdings, Inc.                             | D                | Equity           |
| FNF           | FIDELITY NATIONAL FINANCIAL                              | D                | Equity           |
| FNGR          | FINGERMOTION INC   | D                | Equity           |
| FNGS          | MicroSectors FANG+ ETN                                   | D                | ETF              |
| FNKO          | Funko, Inc.  | D                | Equity           |
| FNV           | Franco-Nevada Corporation                                | D                | Equity           |
| FOA           | Finance of America Companies Inc.                        | D                | Equity           |
| FOLD          | Amicus Therapeutics, Inc.                                | D                | Equity           |
| FOR           | Forestar Group Inc.                                      | D                | Equity           |
| FORM          | FormFactor Inc.  | D                | Equity           |
| FOSL          | FOSSIL, INC.   | D                | Equity           |
| FOUR          | Shift4 Payments, Inc.                                    | D                | Equity           |
| FOX           | FOX CORPCL B COM   | D                | Equity           |
| FOXA          | (New) Fox Corporation Class A                            | D                | Equity           |
| FOXF          | Fox Factory Holding Corp.                                | D                | Equity           |
| FPE           | First Trust Preferred Securities and Income ETF          | D                | ETF              |
| FPH           | FIVE POINT HOLDINGS LLC                                  | D                | Equity           |
| FPI           | Farmland Partners Inc.                                   | D                | Equity           |
| FRGE          | FORGE GLOBAL HOLDINGS, INC.                              | D                | Equity           |
| FRHC          | FREEDOM HOLDING CORP.                                    | D                | Equity           |
| FRO           | FRONTLINE LIMITED  | D                | Equity           |
| FROG          | JFROG LTD.   | D                | Equity           |
| FRPT          | Freshpet, Inc.   | D                | Equity           |
| FRSH          | FRESHWORKS INC   | D                | Equity           |
| FRSX          | FORESIGHT AUTONOMOUS HOLDINGS LTD                        | D                | Equity           |
| FRT           | Federal Realty Investment Trust                          | D                | Equity           |
| FSK           | FS KKR Capital Corp.                                     | D                | Equity           |
| FSLR          | FIRST SOLAR, INC.  | D                | Equity           |
| FSLY          | Fastly, Inc.   | D                | Equity           |
| FSM           | Fortuna Silver Mines Inc.                                | D                | Equity           |
| FSP           | Franklin Street Properties Corporation                   | D                | Equity           |
| FSS           | FEDERAL SIGNAL CORP                                      | D                | Equity           |
| FTAI          | Fortress Transportation and Infrastructure Investors LLC | D                | Equity           |
| FTCI          | FTC SOLAR, INC.  | D                | Equity           |
| FTDR          | frontdoor, inc.  | D                | Equity           |
| FTEK          | Fuel Tech inc.   | D                | Equity           |
| FTHM          | FATHOM HOLDINGS INC.                                     | D                | Equity           |
| FTI           | FMC TECHNOLOGIES, INC.                                   | D                | Equity           |
| FTK           | Flotek Industries Inc                                    | D                | Equity           |
| FTNT          | FORTINET INC.  | D                | Equity           |
| FTRE          | FORTREA HOLDINGS INC.                                    | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                    | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| FTS           | Fortis Inc.  | D                | Equity           |
| FTV           | Fortive Corporation                                    | D                | Equity           |
| FUBO          | FUBOTV INC.  | D                | Equity           |
| FUL           | FULLER (H.B.) CO                                       | D                | Equity           |
| FULC          | FULCRUM THERAPEUTICS, INC.                             | D                | Equity           |
| FULT          | Fulton Financial Corporation                           | D                | Equity           |
| FUN           | Six Flags Entertainment Corporation                    | D                | Equity           |
| FUTU          | Futu Holdings Limited                                  | D                | Equity           |
| FVRR          | Fiverr International Ltd.                              | D                | Equity           |
| FWONK         | Liberty Media Corporation Series C Liberty Formula One | D                | Equity           |
| FWRD          | Forward Air Corporation                                | D                | Equity           |
| FWRG          | FIRST WATCH RESTAURANT GROUP                           | D                | Equity           |
| FXB           | CurrencyShares British Pound Sterling Trust            | D                | ETF              |
| FXC           | CurrencyShares Canadian Dollar Trust                   | D                | ETF              |
| FXE           | CURRENCYSHARES EURO TRUST                              | D                | ETF              |
| FXF           | CurrencyShares Swiss Franc ETF                         | D                | ETF              |
| FXI           | ISHARES FTSE CHINA 25 INDEX FUND                       | D                | ETF              |
| FXP           | ProShares UltraShort FTSE China 50                     | D                | ETF              |
| FXY           | CURRENCYSHARES JAPANESE YEN TRUST                      | D                | ETF              |
| FYBR          | FRONTIER COMMUNICATIONS PARENT, INC                    | D                | Equity           |
| G             | GENPACT LIMITED  | D                | Equity           |
| GAIN          | Gladstone Investment Corporation                       | D                | Equity           |
| GALT          | GALECTIN THERAPEUTICS, INC.                            | D                | Equity           |
| GAMB          | GAMBLING.COM GROUP LTD                                 | D                | Equity           |
| GANX          | GAIN THERAPEUTICS, INC.                                | D                | Equity           |
| GAP           | Gap, Inc   | D                | Equity           |
| GASS          | StealthGas Inc   | D                | Equity           |
| GAU           | Galiano Gold Inc.                                      | D                | Equity           |
| GBDC          | Golub Capital BDC, Inc.                                | D                | Equity           |
| GBIO          | GENERATION BIO CO.                                     | D                | Equity           |
| GBTC          | Grayscale Bitcoin Trust ETF                            | D                | ETF              |
| GBX           | THE GREENBRIER COMPANIES, INC.                         | D                | Equity           |
| GCI           | Gannett Co., Inc.                                      | D                | Equity           |
| GCMG          | GCM GROSVENOR INC.                                     | D                | Equity           |
| GCO           | Genesco Inc.   | D                | Equity           |
| GCT           | GIGACLOUD TECHNOLOGY, INC. CLASS A                     | D                | Equity           |
| GD            | GENERAL DYNAMICS CORPORATION                           | D                | Equity           |
| GDDY          | GoDaddy Inc.   | D                | Equity           |
| GDEN          | Golden Entertainment, Inc.                             | D                | Equity           |
| GDOT          | Green Dot Corporation                                  | D                | Equity           |
| GDRX          | GOODRX HOLDINGS INC                                    | D                | Equity           |
| GDS           | GDS Holdings Limited                                   | D                | Equity           |
| GDX           | MARKET VECTORS GOLD MINERS ETF                         | D                | ETF              |
| GDXJ          | VANECK VECTORS JUNIOR GOLD MINERS ETF                  | D                | ETF              |
| GDYN          | GRID DYNAMICS HOLDINGS, INC.                           | D                | Equity           |
| GE            | GE Aerospace   | D                | Equity           |
| GEF           | Greif, Inc.  | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                 | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|-------------------------------------|------------------|------------------|
| GEHC          | GE HEALTHCARE TECHNOLOGIES INC.     | D                | Equity           |
| GEL           | Genesis Energy L.P.                 | D                | Equity           |
| GEN           | Gen Digital Inc.                    | D                | Equity           |
| GENI          | Genius Sports Limited               | D                | Equity           |
| GEO           | GEO Group Inc (The)                 | D                | Equity           |
| GEOS          | GEOSPACE TECHNOLOGIES CORPORATION   | D                | Equity           |
| GERN          | GERON CORPORATION                   | D                | Equity           |
| GES           | GUESS? INC.                         | D                | Equity           |
| GETY          | Getty Images Holdings, Inc.         | D                | Equity           |
| GEV           | GE VERNOVA INC.                     | D                | Equity           |
| GEVO          | GEVO, INC.                          | D                | Equity           |
| GFI           | GOLD FIELDS LTD.                    | D                | Equity           |
| GFL           | GFL Environmental Inc.              | D                | Equity           |
| GFS           | GLOBALFOUNDRIES INC.                | D                | Equity           |
| GGAL          | GRUPO FINANCIERO GALICIA S.A.       | D                | Equity           |
| GGB           | GERDAU S.A. (ADR)                   | D                | Equity           |
| GGG           | GRACO, INC.                         | D                | Equity           |
| GGLL          | Direxion Daily GOOGL Bull 2X Shares | D                | ETF              |
| GGR           | GOGORO INC.                         | D                | Equity           |
| GH            | Guardant Health, Inc.               | D                | Equity           |
| GHRS          | GH RESEARCH PLC                     | D                | Equity           |
| GIB           | CGI Group Inc.                      | D                | Equity           |
| GIII          | G-III Apparel Group Ltd             | D                | Equity           |
| GIL           | Gildan Activewear Inc               | D                | Equity           |
| GILD          | GILEAD SCIENCES INC.                | D                | Equity           |
| GILT          | Gilat Satellite Networks Ltd.       | D                | Equity           |
| GIS           | GENERAL MILLS, INC.                 | D                | Equity           |
| GKOS          | Glaukos Corporation                 | D                | Equity           |
| GL            | Globe Life Inc.                     | D                | Equity           |
| GLAD          | Gladstone Capital Corporation       | D                | Equity           |
| GLBE          | GLOBAL ONLINE LTD                   | D                | Equity           |
| GLBS          | GLOBUS MARITIME LIMITED             | D                | Equity           |
| GLD           | SPDR GOLD TRUST                     | D                | ETF              |
| GLDD          | Great Lakes Dredge & Dock           | D                | Equity           |
| GLL           | ProShares UltraShort Gold           | D                | ETF              |
| GLNG          | Golar LNG Ltd                       | D                | Equity           |
| GLOB          | Globant S.A.                        | D                | Equity           |
| GLP           | Global Partners LP                  | D                | Equity           |
| GLPG          | Galapagos NV                        | D                | Equity           |
| GLPI          | Gaming and Leisure Properties Inc   | D                | Equity           |
| GLRE          | Greenlight Capital Re, Ltd.         | D                | Equity           |
| GLUE          | MONTE ROSA THERAPEUTICS, INC.       | D                | Equity           |
| GLW           | CORNING INC.                        | D                | Equity           |
| GLYC          | GlycoMimetics, Inc.                 | D                | Equity           |
| GM            | GENERAL MOTORS COMPANY              | D                | Equity           |
| GMAB          | Genmab A/S                          | D                | Equity           |
| GME           | GAMESTOP CORPORATION                | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                      | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| GMED          | GLOBUS MEDICAL, INC.                     | D                | Equity           |
| GMRE          | Global Medical REIT Inc.                 | D                | Equity           |
| GNK           | GENCO SHIPPING & TRADING LTD             | D                | Equity           |
| GNL           | Global Net Lease, Inc.                   | D                | Equity           |
| GNRC          | Generac Holdings Inc                     | D                | Equity           |
| GNSS          | Genasys Inc.                             | D                | Equity           |
| GNTX          | GENTEX CORP.                             | D                | Equity           |
| GNW           | GENWORTH FINANCIAL INC.                  | D                | Equity           |
| GO            | Grocery Outlet Holding Corp              | D                | Equity           |
| GOGL          | Golden Ocean Group Limited               | D                | Equity           |
| GOGO          | GOGO, INC.                               | D                | Equity           |
| GOLF          | Acushnet Holdings Corp.                  | D                | Equity           |
| GOOD          | Gladstone Commercial Corporation         | D                | Equity           |
| GOOG          | Alphabet Inc. Class C                    | D                | Equity           |
| GOOGL         | Alphabet Inc. Class A                    | D                | Equity           |
| GOOS          | Canada Goose Holdings Inc.               | D                | Equity           |
| GORO          | Gold Resource Corporation                | D                | Equity           |
| GOSS          | Gossamer Bio Inc                         | D                | Equity           |
| GOTU          | GSX Techedu Inc.                         | D                | Equity           |
| GP            | GREENPOWER MOTOR COMPANY INC.            | D                | Equity           |
| GPC           | GENUINE PARTS                            | D                | Equity           |
| GPCR          | STRUCTURE THERAPEUTIC INC                | D                | Equity           |
| GPI           | GROUP 1 AUTOMOTIVE INC.                  | D                | Equity           |
| GPK           | Graphic Packaging Holding Company        | D                | Equity           |
| GPMT          | Granite Point Mortgage Trust Inc.        | D                | Equity           |
| GPN           | GLOBAL PAYMENTS INC.                     | D                | Equity           |
| GPRE          | Green Plains Renewable Energy, Inc.      | D                | Equity           |
| GPRK          | Geopark Ltd                              | D                | Equity           |
| GPRO          | GOPRO, INC.                              | D                | Equity           |
| GRAB          | Grab Holdings Limited                    | D                | Equity           |
| GRAL          | GRAIL INC                                | D                | Equity           |
| GRBK          | Green Brick Partners, Inc.               | D                | Equity           |
| GRFS          | Grifols SA                               | D                | Equity           |
| GRMN          | GARMIN LTD.                              | D                | Equity           |
| GRND          | GRINDR INC COM                           | D                | Equity           |
| GRNY          | FUNDSTRAT GRANNY SHOTS US LARGE CAP ETF  | D                | ETF              |
| GROV          | GROVE COLLABORATIVE HOLDINGS, INC.       | D                | Equity           |
| GROY          | GOLD ROYALTY CORP.                       | D                | Equity           |
| GRPN          | GROUPON, INC.                            | D                | Equity           |
| GRRR          | GORILLA TECHNOLOGY GROUP INC.            | D                | Equity           |
| GRWG          | GrowGeneration Corp.                     | D                | Equity           |
| GS            | THE GOLDMAN SACHS GROUP, INC.            | D                | Equity           |
| GSAT          | Globalstar, Inc                          | D                | Equity           |
| GSBD          | GOLDMAN SACHS BDC, INC                   | D                | Equity           |
| GSG           | iShares S&P GSCI Commodity Indexed Trust | D                | ETF              |
| GSHD          | Goosehead Insurance, Inc                 | D                | Equity           |
| GSIT          | GSI TECHNOLOGY                           | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                                       | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| GSK           | GLAXOSMITHKLINE PLC                                       | D                | Equity           |
| GSL           | GLOBAL SHIP LEASE, INC.                                   | D                | Equity           |
| GSM           | Globe Specialty Metals Inc                                | D                | Equity           |
| GT            | GOODYEAR TIRE & RUBBER COMPANY                            | D                | Equity           |
| GTE           | Gran Tierra Energy Inc.                                   | D                | Equity           |
| GTES          | Gates Industrial Corporation plc                          | D                | Equity           |
| GTIM          | Good Times Restaurants Inc.                               | D                | Equity           |
| GTLB          | GITLAB INC  | D                | Equity           |
| GTLS          | Chart Industries Inc                                      | D                | Equity           |
| GTM           | ZoomInfo Technologies Inc.                                | D                | Equity           |
| GTN           | Gray Television, Inc.                                     | D                | Equity           |
| GTX           | Garrett Motion Inc.                                       | D                | Equity           |
| GTY           | Getty Realty Corp.  | D                | Equity           |
| GUSH          | Direxion Dly S&P Oil&Gs Ex&Prd BI 3X ETF                  | D                | ETF              |
| GVA           | Granite Construction Incorporated                         | D                | Equity           |
| GWRE          | Guidewire Software, Inc.                                  | D                | Equity           |
| GWW           | GRAINGER, W.W. INC.                                       | D                | Equity           |
| GXG           | Global X MSCI Colombia ETF                                | D                | ETF              |
| GXO           | GXO LOGISTICS INC   | D                | Equity           |
| H             | Hyatt Hotels Corporation                                  | D                | Equity           |
| HACK          | PureFunds ISE Cyber Security ETF                          | D                | ETF              |
| HAE           | Haemonetics Corporation                                   | D                | Equity           |
| HAFN          | HAFNIA LIMITED  | D                | Equity           |
| HAIN          | THE HAIN CELESTIAL GROUP, INC.                            | D                | Equity           |
| HAL           | HALLIBURTON COMPANY                                       | D                | Equity           |
| HALO          | Halozyme Therapeutics Inc.                                | D                | Equity           |
| HAS           | HASBRO INC.   | D                | Equity           |
| HASI          | Hannon Armstrong Sustainable Infrastructure Capital, Inc. | D                | Equity           |
| HAYW          | HAYWARD HOLDINGS INC                                      | D                | Equity           |
| HBAN          | HUNTINGTON BANCSHARES INCORPORATED                        | D                | Equity           |
| HBI           | Hanesbrands Inc.  | D                | Equity           |
| HBIO          | Harvard Bioscience, Inc.                                  | D                | Equity           |
| HBM           | HudBay Minerals, Inc.                                     | D                | Equity           |
| HCA           | HCA HOLDINGS, INC.  | D                | Equity           |
| HCAT          | Health Catalyst, Inc.                                     | D                | Equity           |
| HCC           | Warrior Met Coal, Inc.                                    | D                | Equity           |
| HCM           | HUTCHMED (China) Limited                                  | D                | Equity           |
| HCSG          | Healthcare Services Group, Inc.                           | D                | Equity           |
| HD            | THE HOME DEPOT, INC.                                      | D                | Equity           |
| HDB           | HDFC BANK LTD   | D                | Equity           |
| HDGE          | AdvisorShares Ranger Equity Bear ETF                      | D                | ETF              |
| HDSN          | Hudson Technologies, Inc.                                 | D                | Equity           |
| HDV           | iShares High Dividend Equity Fund                         | D                | ETF              |
| HE            | Hawaiian Electric Industries Inc.                         | D                | Equity           |
| HEI           | HEICO Corporation   | D                | Equity           |
| HELE          | HELEN OF TROY LTD   | D                | Equity           |
| HES           | HESS CORPORATION  | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                             | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| HESM          | Hess Midstream LP                               | D                | Equity           |
| HFFG          | HF FOODS GROUP, INC.                            | D                | Equity           |
| HGTY          | HAGERTY INC                                     | D                | Equity           |
| HGV           | Hilton Grand Vacations Inc.                     | D                | Equity           |
| HHH           | Howard Hughes Holdings Inc.                     | D                | Equity           |
| HIBS          | DIREXION DAILY S&P 500 HIGH BETA BEAR 3X SHARES | D                | ETF              |
| HIG           | THE HARTFORD FINANCIAL SERVICES GROUP, INC.     | D                | Equity           |
| HII           | Huntington Ingalls Industries, Inc.             | D                | Equity           |
| HIMS          | Hims & Hers Health, Inc.                        | D                | Equity           |
| HIMX          | Himax Technologies, Inc.                        | D                | Equity           |
| HIPO          | Hippo Holdings Inc.                             | D                | Equity           |
| HITI          | HIGH TIDE, INC.                                 | D                | Equity           |
| HIVE          | HIVE BLOCKCHAIN TECHNOLOGIES LTD.               | D                | Equity           |
| HIW           | HIGHWOODS PROPERTIES, INC.                      | D                | Equity           |
| HL            | HECLA MINING COMPANY                            | D                | Equity           |
| HLF           | HERBALIFE LTD.                                  | D                | Equity           |
| HLIT          | Harmonic Inc                                    | D                | Equity           |
| HLLY          | HOLLEY INC.                                     | D                | Equity           |
| HLN           | HALEON PLC                                      | D                | Equity           |
| HLNE          | Hamilton Lane, Inc.                             | D                | Equity           |
| HLT           | HILTON WORLDWIDE HOLDINGS INC.                  | D                | Equity           |
| HLX           | HELIX ENERGY SOLUTIONS GROUP INC                | D                | Equity           |
| HMC           | HONDA MOTOR COMPANY LTD                         | D                | Equity           |
| HMST          | HomeStreet Inc                                  | D                | Equity           |
| HMY           | HARMONY GOLD MINING COMPANY LIMITED             | D                | Equity           |
| HNRG          | HALLADOR ENERGY CO                              | D                | Equity           |
| HNST          | THE HONEST COMPANY, INC                         | D                | Equity           |
| HOG           | HARLEY-DAVIDSON, INC.                           | D                | Equity           |
| HOLX          | HOLOGIC, INC.                                   | D                | Equity           |
| HOMB          | Home Bancshares, Inc.                           | D                | Equity           |
| HON           | HONEYWELL INTERNATIONAL INC.                    | D                | Equity           |
| HOOD          | Robinhood Markets, Inc.                         | D                | Equity           |
| HOUS          | Anywhere Real Estate Inc.                       | D                | Equity           |
| HOWL          | WEREWOLF THERAPEUTICS, INC.                     | D                | Equity           |
| HP            | HELMERICH & PAYNE INC                           | D                | Equity           |
| HPE           | Hewlett Packard Enterprise Company              | D                | Equity           |
| HPK           | HIGHPEAK ENERGY INC                             | D                | Equity           |
| HPP           | Hudson Pacific Properties Inc.                  | D                | Equity           |
| HPQ           | HP Inc.   | D                | Equity           |
| HQY           | HealthEquity, Inc.                              | D                | Equity           |
| HR            | Healthcare Realty Trust Incorporated            | D                | Equity           |
| HRB           | H&R BLOCK, INC.                                 | D                | Equity           |
| HRI           | Herc Holdings Inc.                              | D                | Equity           |
| HRL           | HORMEL FOODS CORPORATION                        | D                | Equity           |
| HRMY          | HARMONY BIOSCIENCES HOLDINGS IN                 | D                | Equity           |
| HROW          | Harrow Health Inc                               | D                | Equity           |
| HRTG          | Heritage Insurance Holdings, Inc.               | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                                 | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| HRTX          | Heron Therapeutics, Inc.                            | D                | Equity           |
| HRZN          | Horizon Technology Finance Corp                     | D                | Equity           |
| HSAI          | HESAI GROUP   | D                | Equity           |
| HSBC          | HSBC HOLDINGS PLC                                   | D                | Equity           |
| HSIC          | Henry Schein, Inc.                                  | D                | Equity           |
| HST           | Host Hotels & Resorts                               | D                | Equity           |
| HSY           | HERSHEY CO THE                                      | D                | Equity           |
| HTGC          | Hercules Capital, Inc.                              | D                | Equity           |
| HTHT          | China Lodging Group, Limited                        | D                | Equity           |
| HTLD          | HEARTLAND EXPRESS, INC.                             | D                | Equity           |
| HTOO          | FUSION FUEL GREEN PLC                               | D                | Equity           |
| HTZ           | Hertz Global Holdings, Inc.                         | D                | Equity           |
| HUBB          | Hubbell Incorporated                                | D                | Equity           |
| HUBS          | HubSpot, Inc.                                       | D                | Equity           |
| HUM           | HUMANA INC.   | D                | Equity           |
| HUMA          | Humacyte, Inc.                                      | D                | Equity           |
| HUN           | HUNTSMAN CORPORATION                                | D                | Equity           |
| HURN          | Huron Consulting Group, Inc.                        | D                | Equity           |
| HUSA          | HOUSTON AMERICAN ENERGY CORPORATION                 | D                | Equity           |
| HUT           | HUT 8 MINING CORP                                   | D                | Equity           |
| HUYA          | HUYA Inc.   | D                | Equity           |
| HVT           | Haverty Furniture Companies, Inc                    | D                | Equity           |
| HWM           | Howmet Aerospace Inc                                | D                | Equity           |
| HXL           | HEXCEL CORPORATION                                  | D                | Equity           |
| HYD           | Market Vectors High Yield Municipal Index ETF       | D                | ETF              |
| HYG           | ISHARES IBOX \$ HIGH YIELD CORPORATE BOND           | D                | ETF              |
| HYLN          | Hyllion Holdings Corporation                        | D                | Equity           |
| HYMB          | SPDR Nuveen Bloomberg High Yield Municipal Bond ETF | D                | ETF              |
| HYMC          | HYCROFT MINING HOLDING                              | D                | Equity           |
| HYPH          | HYPERFINE INC                                       | D                | Equity           |
| HZO           | MARINEMAX , INC.                                    | D                | Equity           |
| IAC           | IAC/InterActiveCorp                                 | D                | Equity           |
| IAG           | IAMGOLD CORPORATION                                 | D                | Equity           |
| IAI           | iShares U.S. Broker-Dealers & Sec. Exchanges ETF    | D                | ETF              |
| IART          | Integra LifeSciences Holdings Corporation           | D                | Equity           |
| IAS           | INTEGRAL AD SCIENCE HOLDING CORP                    | D                | Equity           |
| IAT           | iShares US Regional Banks                           | D                | ETF              |
| IAU           | iShares Gold Trust                                  | D                | ETF              |
| IBB           | ISHARES NASDAQ BIOTECHNOLOGY                        | D                | ETF              |
| IBIT          | iShares Bitcoin Trust                               | D                | ETF              |
| IBKR          | Interactive Brokers Group Inc                       | D                | Equity           |
| IBM           | INTERNATIONAL BUSINESS MACHINES CORPORATION         | D                | Equity           |
| IBN           | ICICI BANK LIMITED                                  | D                | Equity           |
| IBP           | Installed Building Products, Inc.                   | D                | Equity           |
| IBRX          | ImmunityBio, Inc.                                   | D                | Equity           |
| IBTA          | IBOTTA, INC.  | D                | Equity           |
| ICAD          | iCAD Inc.   | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                                | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| ICE           | Intercontinental Exchange Inc                      | D                | Equity           |
| ICHR          | Ichor Holdings, Ltd.                               | D                | Equity           |
| ICL           | ICL GROUP LTD.ICL GROUP LTD.                       | D                | Equity           |
| ICLN          | iShares Global Clean Energy ETF                    | D                | ETF              |
| ICLR          | ICON Public Limited Company                        | D                | Equity           |
| ICUI          | ICU MEDICAL, INC.                                  | D                | Equity           |
| IDCC          | INTERDIGITAL, INC.                                 | D                | Equity           |
| IDN           | Intellicheck, Inc.                                 | D                | Equity           |
| IDR           | IDAHO STRATEGIC RESOURCES INC                      | D                | Equity           |
| IDT           | IDT Corporation                                    | D                | Equity           |
| IDV           | iShares International Select Dividend ETF          | D                | ETF              |
| IDXX          | IDEXX Laboratories, Inc.                           | D                | Equity           |
| IDYA          | IDEAYA BIOSCIENCES, INC.                           | D                | Equity           |
| IE            | IVANHOE ELECTRIC INC.                              | D                | Equity           |
| IEF           | iShares 7 -10 Year Treasury Bond ETF               | D                | ETF              |
| IEFA          | iShares Core MSCI EAFE ETF                         | D                | ETF              |
| IEI           | iShares 3-7 Year Treasury Bond ETF                 | D                | ETF              |
| IEMG          | iShares Core MSCI Emerging Markets                 | D                | ETF              |
| IEO           | iShares U.S. Oil&Gas Explor&Prodtn                 | D                | ETF              |
| IEP           | ICAHN ENTERPRISES, L.P.                            | D                | Equity           |
| IESC          | IES HOLDINGS, INC.                                 | D                | Equity           |
| IEV           | iShares Europe                                     | D                | ETF              |
| IEX           | IDEX Corporation                                   | D                | Equity           |
| IEZ           | iShares U.S. Oil Equipment&Services                | D                | ETF              |
| IFF           | International Flavors & Fragrances Inc.            | D                | Equity           |
| IFRX          | InflaRx N.V.                                       | D                | Equity           |
| IGC           | IGC Pharma, Inc.                                   | D                | Equity           |
| IGIB          | iSharesTrustiShares 5-10 Yr Inv Grade Corp BondETF | D                | ETF              |
| IGM           | iShares Expanded Tech Sector ETF                   | D                | ETF              |
| IGMS          | IGM Biosciences, Inc                               | D                | Equity           |
| IGT           | International Game Technology Plc                  | D                | Equity           |
| IGV           | Tech-Software Sector ETF                           | D                | ETF              |
| IHI           | iShares U.S. Medical Devices ETF                   | D                | ETF              |
| IHRT          | iHeartMedia Inc                                    | D                | Equity           |
| IHS           | IHS HOLDING LTD.                                   | D                | Equity           |
| IIIN          | INSTEEL INDUSTRIES INC                             | D                | Equity           |
| IIIV          | I3 VERTICALS INC                                   | D                | Equity           |
| IIPR          | Innovative Industrial Properties, Inc.             | D                | Equity           |
| IJH           | iShares Core S&P Mid-Cap ETF                       | D                | ETF              |
| IJR           | iShares Core S&P Small-Cap ETF                     | D                | ETF              |
| IJS           | iShares S&P Small-Cap 600 Value                    | D                | ETF              |
| ILF           | iShares Latin America 40                           | D                | ETF              |
| ILMN          | ILLUMINA INC.                                      | D                | Equity           |
| ILPT          | INDUSTRIAL LOGISTICS PROPERTIES TRUST              | D                | Equity           |
| IMAB          | I-MAB  | D                | Equity           |
| IMAX          | IMAX CORPORATION                                   | D                | Equity           |
| IMCR          | IMMUNOCORE HOLDINGS PLC                            | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>               | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|-----------------------------------|------------------|------------------|
| IMMP          | IMMUTEP LTD                       | D                | Equity           |
| IMMR          | IMMERSION CORP                    | D                | Equity           |
| IMNM          | IMMUNOME, INC                     | D                | Equity           |
| IMO           | IMPERIAL OIL LTD.                 | D                | Equity           |
| IMPP          | IMPERIAL PETROLEUM INC.           | D                | Equity           |
| IMTX          | IMMATICS N.V.                     | D                | Equity           |
| IMUX          | Immunic, Inc                      | D                | Equity           |
| IMVT          | IMMUNOVANT INC                    | D                | Equity           |
| IMXI          | INTERNATIONAL MONEY EXPRESS, INC. | D                | Equity           |
| INCY          | INCYTE GENOMICS INC               | D                | Equity           |
| INDA          | iShares MSCI India                | D                | ETF              |
| INDI          | indie Semiconductor, Inc          | D                | Equity           |
| INDL          | Direxion Daily India Bull 3x ETF  | D                | ETF              |
| INDV          | INDIVIOR PLC                      | D                | Equity           |
| INFA          | INFORMATICA, INC.                 | D                | Equity           |
| INFY          | INFOSYS LTD.                      | D                | Equity           |
| ING           | ING GROEP N.V.                    | D                | Equity           |
| INGM          | Ingram Micro Holding Corporation  | D                | Equity           |
| INGN          | Inogen, Inc.                      | D                | Equity           |
| INGR          | Ingredion Incorporated            | D                | Equity           |
| INMB          | IMMUNE BIO INC                    | D                | Equity           |
| INMD          | InMode Ltd.                       | D                | Equity           |
| INN           | Summit Hotel Properties, Inc.     | D                | Equity           |
| INNV          | INNOVAGE HOLDING CORP             | D                | Equity           |
| INO           | INOVIO PHARMACEUTICALS, INC.      | D                | Equity           |
| INOD          | Innodata Inc                      | D                | Equity           |
| INSE          | INSPIRED ENTERTAINMENT, INC.      | D                | Equity           |
| INSG          | Inseego Corporation               | D                | Equity           |
| INSM          | Insmad, Inc.                      | D                | Equity           |
| INSP          | Inspire Medical Systems Inc       | D                | Equity           |
| INSW          | International Seaways, Inc        | D                | Equity           |
| INTA          | Intapp, Inc.                      | D                | Equity           |
| INTC          | INTEL CORPORATION                 | D                | Equity           |
| INTR          | INTER & CO., INC.                 | D                | Equity           |
| INTT          | INTEST CORPORATION                | D                | Equity           |
| INTU          | INTUIT CORP                       | D                | Equity           |
| INVA          | Innoviva, Inc.                    | D                | Equity           |
| INVE          | Identiv Inc.                      | D                | Equity           |
| INVH          | Invitation Homes Inc.             | D                | Equity           |
| INVX          | Innovex International, Inc.       | D                | Equity           |
| INVZ          | Innoviz Technologies Ltd.         | D                | Equity           |
| INZY          | INOZYME PHARMA, INC.              | D                | Equity           |
| IONQ          | IonQ, Inc                         | D                | Equity           |
| IONS          | Ionis Pharmaceuticals, Inc.       | D                | Equity           |
| IOT           | SAMSARA, INC.                     | D                | Equity           |
| IOVA          | lovance Biotherapeutics, Inc.     | D                | Equity           |
| IP            | INTERNATIONAL PAPER COMPANY       | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                            | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| IPA           | IMMUNOPRECISE ANTIBODIES LTD.                  | D                | Equity           |
| IPG           | THE INTERPUBLIC GROUP OF COMPANIES, INC.       | D                | Equity           |
| IPGP          | IPG Photonics Corp                             | D                | Equity           |
| IPI           | Intrepid Potash, Inc.                          | D                | Equity           |
| IPO           | Renaissance IPO ETF                            | D                | ETF              |
| IQ            | iQIYI, Inc.                                    | D                | Equity           |
| IQV           | IQVIA Holdings Inc.                            | D                | Equity           |
| IR            | INGERSOLL-RAND PLC                             | D                | Equity           |
| IRBT          | iRobot Corporation                             | D                | Equity           |
| IRDM          | Iridium Communications Inc.                    | D                | Equity           |
| IREN          | Iris Energy Limited                            | D                | Equity           |
| IRM           | IRON MOUNTAIN INC. (elec div)                  | D                | Equity           |
| IRON          | DISC MEDICINE, INC.                            | D                | Equity           |
| IRTC          | iRhythm Technologies, Inc                      | D                | Equity           |
| IRWD          | Ironwood Pharmaceuticals Inc                   | D                | Equity           |
| ISPR          | ISPIRE TECHNOLOGY, INC.                        | D                | Equity           |
| ISRG          | INTUITIVE SURGICAL, INC.                       | D                | Equity           |
| IT            | Gartner, Inc.                                  | D                | Equity           |
| ITA           | iShares US Aerospace and Defense ETF           | D                | ETF              |
| ITB           | ISHARES U.S. HOME CONSTRUCTION ETF             | D                | ETF              |
| ITGR          | Integer Holdings Corporation                   | D                | Equity           |
| ITOS          | iTeos Therapeutics, Inc.                       | D                | Equity           |
| ITOT          | iShares Core S&P Total U.S. Stock Market ETF   | D                | ETF              |
| ITP           | IT Tech Packaging, Inc.                        | D                | Equity           |
| ITRI          | ITRON, INC.                                    | D                | Equity           |
| ITT           | ITT Inc.                                       | D                | Equity           |
| ITUB          | ITAU UNIBANCO HOLDING S.A.                     | D                | Equity           |
| ITW           | ILLINOIS TOOL WORKS INC.                       | D                | Equity           |
| IVE           | iShares S&P 500 Value Index Fund               | D                | ETF              |
| IVOL          | QUADRATIC INTEREST RATE VOL. AND INFLATION ETF | D                | ETF              |
| IVR           | INVESCO MORTGAGE CAPITAL INCCOM                | D                | Equity           |
| IVV           | iShares Core S&P 500 ETF                       | D                | ETF              |
| IVVD          | Invivyd, Inc.                                  | D                | Equity           |
| IVW           | iShares S&P 500 Growth ETF                     | D                | ETF              |
| IVZ           | Invesco Ltd                                    | D                | Equity           |
| IWB           | iShares Russell 1000                           | D                | ETF              |
| IWD           | ISHARES RUSSELL 1000 VALUE ETF                 | D                | ETF              |
| IWF           | iShares Russell 1000 Growth ETF                | D                | ETF              |
| IWM           | ISHARES RUSSELL 2000 INDEX                     | D                | ETF              |
| IWN           | ISHRS RUSSELL 2000 VALUE ETF                   | D                | ETF              |
| IWO           | ISHRS RUSSELL 2000 GROWTH INDX                 | D                | ETF              |
| IWP           | iShares Russell Midcap Growth Index Fund ETF   | D                | ETF              |
| IWR           | ISHARES RUSSELL MIDCAP INDEX FUND              | D                | ETF              |
| IYR           | ISHARES DOW JONES US REAL ESTATE               | D                | ETF              |
| IYT           | ISHARES DOW JONES TRANSPORTATION AVERAGE       | D                | ETF              |
| IYW           | iShares US Technology                          | D                | ETF              |
| J             | Jacobs Engineering Group Inc.                  | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                          | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| JACK          | JACK IN THE BOX, INC                         | D                | Equity           |
| JAKK          | JAKKS PACIFIC, INC.                          | D                | Equity           |
| JAMF          | Jamf Holding Corp                            | D                | Equity           |
| JANX          | JANUX THERAPEUTICS, INC.                     | D                | Equity           |
| JAZZ          | Jazz Pharmaceuticals Plc                     | D                | Equity           |
| JBBB          | JANUS HENDERSON B-BBB CLO ETF                | D                | ETF              |
| JBGS          | JBG SMITH Properties                         | D                | Equity           |
| JBHT          | JB HUNT TRANSPORT SERVICES INC.              | D                | Equity           |
| JBI           | Janus International Group, Inc.              | D                | Equity           |
| JBL           | JABIL CIRCUIT INC.                           | D                | Equity           |
| JBLU          | JETBLUE AIRWAYS CORPORATI                    | D                | Equity           |
| JBTM          | JBT Marel Corporation                        | D                | Equity           |
| JCI           | Johnson Controls International plc           | D                | Equity           |
| JD            | JD.COM, INC.                                 | D                | Equity           |
| JDST          | DIREXION DAILY JR GLD MNRS BEAR 3X ETF       | D                | ETF              |
| JEF           | Jefferies Financial Group Inc.               | D                | Equity           |
| JELD          | JELD-WEN Holding, Inc                        | D                | Equity           |
| JEPI          | JPMORGAN EQUITY PREMIUM INCOME ETF           | D                | ETF              |
| JEPQ          | J.P. MORGAN NASDAQ EQUITY PREMIUM INCOME ETF | D                | ETF              |
| JETS          | US Global Jets ETF                           | D                | ETF              |
| JFIN          | JIAYIN GROUP INC.                            | D                | Equity           |
| JHG           | Janus Henderson Group Plc                    | D                | Equity           |
| JKHY          | Jack Henry & Associates Inc.                 | D                | Equity           |
| JKS           | Jinkosolar Holding Company Limited           | D                | Equity           |
| JLL           | Jones Lang LaSalle Incorporated              | D                | Equity           |
| JMIA          | Jumia Technologies AG                        | D                | Equity           |
| JNJ           | JOHNSON & JOHNSON                            | D                | Equity           |
| JNK           | SPDR BARCLAYS HIGH YIELD BOND                | D                | ETF              |
| JNPR          | JUNIPER NETWORKS, INC.                       | D                | Equity           |
| JNUG          | DIREXION DAILY JR GLD MNRS BULL 3X ETF       | D                | ETF              |
| JOBY          | Joby Aviation, Inc.                          | D                | Equity           |
| JOE           | ST. JOE CORPORATION                          | D                | Equity           |
| JOYY          | JOYY Inc.                                    | D                | Equity           |
| JPM           | JPMORGAN CHASE & COMPANY                     | D                | Equity           |
| JRVR          | JAMES RIVER GROUP HOLDINGS LTD               | D                | Equity           |
| JSPR          | JASPER THERAPEUTICS INC                      | D                | Equity           |
| JXN           | JACKSON FINANCIAL INCORPORATION              | D                | Equity           |
| JYNT          | JOINT CORP                                   | D                | Equity           |
| K             | Kellanova                                    | D                | Equity           |
| KALV          | KALVISTA PHARMACEUTICALS INC                 | D                | Equity           |
| KAR           | KAR AUCTION SERVICES, INC.                   | D                | Equity           |
| KB            | KB Financial Group, Inc.                     | D                | Equity           |
| KBA           | KraneShares Boserá MSCI China A ETF          | D                | ETF              |
| KBE           | SPDR S&P BANK ETF                            | D                | ETF              |
| KBH           | KB HOME                                      | D                | Equity           |
| KBR           | KBR, Inc.                                    | D                | Equity           |
| KBWB          | PowerShares KBW Bank ETF                     | D                | ETF              |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                       | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| KC            | Kingsoft Cloud Holdings Limited           | D                | Equity           |
| KD            | KYNDRYL HOLDINGS INCORPORATION            | D                | Equity           |
| KDP           | Keurig Dr. Pepper Inc.                    | D                | Equity           |
| KELYA         | Kelly Services Inc                        | D                | Equity           |
| KEP           | KOREA ELECTRIC POWER CORP.                | D                | Equity           |
| KEX           | KIRBY CORPORATION                         | D                | Equity           |
| KEY           | KEYCORP                                   | D                | Equity           |
| KEYS          | Keysight Technologies Inc.                | D                | Equity           |
| KFY           | KORN/FERRY INTERNATIONAL                  | D                | Equity           |
| KGC           | KINROSS GOLD CORPORATION                  | D                | Equity           |
| KGS           | KODIAK GAS SERVICES INC                   | D                | Equity           |
| KHC           | The Kraft Heinz Company                   | D                | Equity           |
| KIE           | SPDR S&P Insurance ETF                    | D                | ETF              |
| KIM           | KIMCO REALTY CORP.                        | D                | Equity           |
| KIND          | Nextdoor Holdings, Inc.                   | D                | Equity           |
| KINS          | KINGSTONE COMPANIES INCORPORATED          | D                | Equity           |
| KIRK          | Kirkland's Inc.                           | D                | Equity           |
| KKR           | KKR & Co. LP                              | D                | Equity           |
| KLAC          | KLA-TENCOR CORPORATION                    | D                | Equity           |
| KLC           | KinderCare Learning Companies, Inc.       | D                | Equity           |
| KLG           | WK KELLOGG CO                             | D                | Equity           |
| KLIC          | KULICKE AND SOFFA IND INC                 | D                | Equity           |
| KLTR          | KALTURA, INC.                             | D                | Equity           |
| KLXE          | KLX ENERGY SERVICES HOLDINGS, INC.        | D                | Equity           |
| KMB           | KIMBERLY-CLARK CORPORATION                | D                | Equity           |
| KMDA          | KAMADA LTD                                | D                | Equity           |
| KMI           | KINDER MORGAN, INC.                       | D                | Equity           |
| KMT           | Kennametal Inc.                           | D                | Equity           |
| KMX           | CARMAX INC.                               | D                | Equity           |
| KN            | KNOWLES CORPORATION                       | D                | Equity           |
| KNDI          | Kandi Technologies Corporation            | D                | Equity           |
| KNF           | KNIFE RIVER CORP                          | D                | Equity           |
| KNOP          | KNOT Offshore Partners LP                 | D                | Equity           |
| KNSA          | Kiniksa Pharmaceuticals, Ltd              | D                | Equity           |
| KNSL          | Kinsale Capital Group Inc                 | D                | Equity           |
| KNTK          | KINETIK HOLDINGS INC.                     | D                | Equity           |
| KNX           | Knight-Swift Transportation Holdings Inc. | D                | Equity           |
| KO            | THE COCA-COLA COMPANY                     | D                | Equity           |
| KOD           | Kodiak Sciences Inc                       | D                | Equity           |
| KODK          | Eastman Kodak Company                     | D                | Equity           |
| KOLD          | ProShares UltraShort Bloomberg Natrl Gas  | D                | ETF              |
| KOPN          | Kopin Corporation                         | D                | Equity           |
| KOS           | Kosmos Energy Ltd                         | D                | Equity           |
| KPTI          | KARYOPHARM THERAPEUTICS, INC.             | D                | Equity           |
| KR            | THE KROGER COMPANY                        | D                | Equity           |
| KRC           | Kilroy Realty Corp.                       | D                | Equity           |
| KRE           | SPDR S&P REGIONAL BANKING ETF             | D                | ETF              |

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| <b>Symbol</b> | <b>Company Name</b>                       | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| KREF          | KKR REAL ESTATE FINANCE TRUST INC.        | D                | Equity           |
| KRON          | KRONOS BIO INC                            | D                | Equity           |
| KROS          | KEROS THERAPEUTICS, INC.                  | D                | Equity           |
| KRP           | KIMBELL ROYALTY PARTNERS LP               | D                | Equity           |
| KRYS          | KRYSTAL BIOTECH, INC.                     | D                | Equity           |
| KSPI          | Joint Stock Company Kaspi.kz              | D                | Equity           |
| KSS           | KOHL'S CORPORATION                        | D                | Equity           |
| KTB           | Kontoor Brands, Inc.                      | D                | Equity           |
| KTCC          | Key Tronic Corporation                    | D                | Equity           |
| KTOS          | Kratos Defense & Security Solutions, Inc. | D                | Equity           |
| KULR          | KULR TECHNOLOGY GROUP INC                 | D                | Equity           |
| KURA          | Kura Oncology, Inc                        | D                | Equity           |
| KVUE          | KENVUE INC.                               | D                | Equity           |
| KVYO          | Klaviyo, Inc.                             | D                | Equity           |
| KW            | Kennedy-Wilson Holdings Inc.              | D                | Equity           |
| KWEB          | KraneShares CSI China Internet ETF        | D                | ETF              |
| KYMR          | KYMERA THERAPEUTICS INC                   | D                | Equity           |
| KYN           | Kayne Anderson MLP Investment Company     | D                | Equity           |
| L             | LOEWS CORPORATION                         | D                | Equity           |
| LAB           | Standard BioTools Inc                     | D                | Equity           |
| LABD          | Direxion Daily S&P Biotech Bear 3X ETF    | D                | ETF              |
| LABU          | Direxion Daily S&P Biotech Bull 3X ETF    | D                | ETF              |
| LAC           | Lithium Americas Corp                     | D                | Equity           |
| LAD           | Lithia Motors Inc                         | D                | Equity           |
| LADR          | Ladder Capital Corp                       | D                | Equity           |
| LAES          | SEALSQ CORP.                              | D                | Equity           |
| LAKE          | Lakeland Industries, Inc.                 | D                | Equity           |
| LAMR          | LAMAR ADVERTISING COMPANY                 | D                | Equity           |
| LAND          | Gladstone Land Corporation                | D                | Equity           |
| LAR           | Lithium Argentina AG                      | D                | Equity           |
| LASE          | Laser Photonics Corporation               | D                | Equity           |
| LASR          | nLIGHT, Inc                               | D                | Equity           |
| LAW           | CS DISCO, INC                             | D                | Equity           |
| LAZ           | LAZARD LTD.                               | D                | Equity           |
| LAZR          | Luminar Technologies Inc                  | D                | Equity           |
| LB            | LANDBRIDGE COMPANY LLC                    | D                | Equity           |
| LBRDK         | Liberty Broadband Corporation             | D                | Equity           |
| LBRT          | Liberty Oilfield Services Inc             | D                | Equity           |
| LBTYA         | LIBERTY GLOBAL INC                        | D                | Equity           |
| LBTYK         | LIBERTY GLOBAL PLC                        | D                | Equity           |
| LC            | LendingClub Corporation                   | D                | Equity           |
| LCID          | Lucid Group, Inc. (LCID)                  | D                | Equity           |
| LCII          | LCI Industries (LCII)                     | D                | Equity           |
| LCTX          | Lineage Cell Therapeutics, Inc            | D                | Equity           |
| LDI           | LOANDEPOT, INC.                           | D                | Equity           |
| LDOS          | LUMOS NETWORKS CORPORATION                | D                | Equity           |
| LE            | LANDS' END, INC.                          | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                      | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| LEA           | Lear Corporation                         | D                | Equity           |
| LECO          | Lincoln Electric Holdings, Inc.          | D                | Equity           |
| LEG           | LEGGETT & PLATT, INC.                    | D                | Equity           |
| LEGH          | LEGACY HOUSING CORPORATION               | D                | Equity           |
| LEGN          | LEGEND BIOTECH CORP                      | D                | Equity           |
| LEN           | LENNAR CORPORATION                       | D                | Equity           |
| LESL          | LESLIES INC                              | D                | Equity           |
| LEU           | CENTRUS ENERGY CORP.                     | D                | Equity           |
| LEVI          | Levi Strauss & Co.                       | D                | Equity           |
| LFCR          | Lifecore Biomedical, Inc                 | D                | Equity           |
| LFMD          | LifeMD, Inc.                             | D                | Equity           |
| LFST          | LIFESTANCE HEALTH GROUP, INC.            | D                | Equity           |
| LFVN          | Lifevantage Corporation                  | D                | Equity           |
| LFWD          | Lifeward Ltd.                            | D                | Equity           |
| LGIH          | LGI Homes, Inc.                          | D                | Equity           |
| LGND          | Ligand Pharmaceuticals Inc.              | D                | Equity           |
| LGO           | Largo Inc.                               | D                | Equity           |
| LH            | LABORATORY CORP OF AMER HLDG             | D                | Equity           |
| LHX           | L3Harris Technologies, Inc.              | D                | Equity           |
| LI            | Li Auto Inc.                             | D                | Equity           |
| LII           | LENNOX INTERNATIONAL, INC.               | D                | Equity           |
| LILA          | LiLAC Group                              | D                | Equity           |
| LILAK         | Liberty LiLAC Group                      | D                | Equity           |
| LIN           | Linde plc                                | D                | Equity           |
| LINC          | Lincoln Educational Services Corporation | D                | Equity           |
| LIND          | Lindblad Expeditions Holdings, Inc       | D                | Equity           |
| LINE          | Lineage, Inc.                            | D                | Equity           |
| LIT           | Global X Lithium & Battery ETF           | D                | ETF              |
| LITE          | Lumentum Holdings Inc.                   | D                | Equity           |
| LIVN          | LivaNova PLC                             | D                | Equity           |
| LKQ           | LKQ Corporation                          | D                | Equity           |
| LLY           | ELI LILLY AND COMPANY                    | D                | Equity           |
| LLYX          | DEFIANCE DAILY TARGET 2X LONG LLY ETF    | D                | ETF              |
| LMB           | LIMBACH HOLDINGS, INC.                   | D                | Equity           |
| LMND          | Lemonade, Inc                            | D                | Equity           |
| LMT           | LOCKHEED MARTIN CORPORATION              | D                | Equity           |
| LNC           | LINCOLN NATIONAL CORPORATION             | D                | Equity           |
| LNG           | CHENIERE ENERGY, INC.                    | D                | Equity           |
| LNN           | Lindsay Corporation                      | D                | Equity           |
| LNT           | Alliant Energy Corporation               | D                | Equity           |
| LNTH          | Lantheus Holdings, Inc                   | D                | Equity           |
| LNW           | Light & Wonder, Inc.                     | D                | Equity           |
| LNZA          | LANZATECH GLOBAL INC.                    | D                | Equity           |
| LOB           | Live Oak Bancshares, Inc                 | D                | Equity           |
| LOCO          | EL POLLO LOCO HOLDINGS, INC.             | D                | Equity           |
| LODE          | Comstock Mining, Inc.                    | D                | Equity           |
| LOGC          | ContextLogic Inc.                        | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                                | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| LOGI          | Logitech International S.A.                        | D                | Equity           |
| LOMA          | Loma Negra Cia Industrial Argentina SA             | D                | Equity           |
| LOOP          | Loop Industries, Inc                               | D                | Equity           |
| LOPE          | Grand Canyon Education, Inc.                       | D                | Equity           |
| LOVE          | The Lovesac Company                                | D                | Equity           |
| LOW           | LOWE'S COMPANIES INC.                              | D                | Equity           |
| LPG           | Dorian LPG Ltd                                     | D                | Equity           |
| LPL           | LG Display Co., Ltd.                               | D                | Equity           |
| LPLA          | LPL Financial Holdings Inc.                        | D                | Equity           |
| LPRO          | OPEN LENDING CORPORATION                           | D                | Equity           |
| LPSN          | LivePerson, Inc.                                   | D                | Equity           |
| LPTX          | LEAP THERAPEUTICS, INC                             | D                | Equity           |
| LPX           | LOUISIANA-PACIFIC CORPORATION                      | D                | Equity           |
| LQD           | iShares iBoxx \$ Invst Grade Crp Bond              | D                | ETF              |
| LQDA          | Liquidia Corporation                               | D                | Equity           |
| LQDT          | LIQUIDITY SERVICES, INC.                           | D                | Equity           |
| LRCX          | LAM RESEARCH CORPORATION                           | D                | Equity           |
| LRMR          | LARIMAR THERAPEUTICS, INC.                         | D                | Equity           |
| LRN           | K12, Inc.  | D                | Equity           |
| LSCC          | Lattice Semiconductor Corporation                  | D                | Equity           |
| LSEA          | LANDSEA HOMES CORPORATION                          | D                | Equity           |
| LSPD          | LIGHTSPEED POS, INC.                               | D                | Equity           |
| LSTR          | LANDSTAR SYSTEM INC                                | D                | Equity           |
| LTBR          | LIGHTBRIDGE CORP                                   | D                | Equity           |
| LTC           | LTC Properties Inc.                                | D                | Equity           |
| LTH           | LIFE TIME GROUP HOLDINGS, INC.                     | D                | Equity           |
| LTPZ          | PIMCO 15+ Year U.S. TIPS Index Exchange-Traded Fnd | D                | ETF              |
| LTRN          | LANTERN PHARMA, INC.                               | D                | Equity           |
| LTRX          | LANTRONIX, INC.                                    | D                | Equity           |
| LU            | LUFAX HOLDING LTD                                  | D                | Equity           |
| LUCK          | Lucky Strike Entertainment Corporation             | D                | Equity           |
| LULU          | LULULEMON ATHLETICA INC.                           | D                | Equity           |
| LUMN          | CenturyLink, Inc.                                  | D                | Equity           |
| LUNG          | PULMONX CORP                                       | D                | Equity           |
| LUNR          | INTUITIVE MACHINES, INC. CLASS A                   | D                | Equity           |
| LUV           | SOUTHWEST AIRLINES COMPANY                         | D                | Equity           |
| LUXE          | LuxExperience B.V.                                 | D                | Equity           |
| LVO           | LiveOne, Inc.                                      | D                | Equity           |
| LVS           | LAS VEGAS SANDS CORPORATION                        | D                | Equity           |
| LW            | Lamb Weston Holdings, Inc.                         | D                | Equity           |
| LWLG          | LIGHTWAVE LOGIC, INC.                              | D                | Equity           |
| LX            | LexinFintech Holdings Ltd.                         | D                | Equity           |
| LXRX          | Lexicon Pharmaceuticals, Inc.                      | D                | Equity           |
| LXU           | LSB Industries Inc.                                | D                | Equity           |
| LYB           | LYONDELLBASELL INDUSTRIES NV                       | D                | Equity           |
| LYEL          | LYELL IMMUNOPHARMA, INC.                           | D                | Equity           |
| LYFT          | Lyft, Inc.   | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| LYG           | Lloyds Banking Group Plc ADR                       | D                | Equity           |
| LYV           | Live Nation Entertainment Inc                      | D                | Equity           |
| LZ            | LEGALZOOM.COM, INC                                 | D                | Equity           |
| LZB           | LA-Z-BOY INC.                                      | D                | Equity           |
| M             | MACY'S, INC.                                       | D                | Equity           |
| MA            | MASTERCARD INCORPORATED                            | D                | Equity           |
| MAA           | Mid-America Apartment Communities Inc.             | D                | Equity           |
| MAC           | THE MACERICH COMPANY                               | D                | Equity           |
| MAG           | MAG Silver Corp.                                   | D                | Equity           |
| MAGS          | Listed Funds Trust Roundhill Magnificent Seven ETF | D                | ETF              |
| MAIN          | Main Street Capital Corporation                    | D                | Equity           |
| MAMA          | MAMAS CREATIONS, INC.                              | D                | Equity           |
| MAN           | MANPOWERGROUP INC.                                 | D                | Equity           |
| MANH          | MANHATTAN ASSOCIATES INC.                          | D                | Equity           |
| MANU          | Manchester United plc                              | D                | Equity           |
| MAPS          | WM Technology, Inc                                 | D                | Equity           |
| MAR           | MARRIOTT INTERNATIONAL, INC.                       | D                | Equity           |
| MARA          | Marathon Patent Group, Inc.                        | D                | Equity           |
| MAS           | MASCO CORP.  | D                | Equity           |
| MASI          | Masimo Corporation                                 | D                | Equity           |
| MASS          | 908 DEVICES INC                                    | D                | Equity           |
| MAT           | MATTEL, INC.                                       | D                | Equity           |
| MATV          | Mativ Holdings, Inc.                               | D                | Equity           |
| MATW          | Matthews International Corporation                 | D                | Equity           |
| MATX          | Matson, Inc.                                       | D                | Equity           |
| MAX           | MEDIAALPHA INC CLASS A                             | D                | Equity           |
| MBB           | iShares Barclays MBS Bond Fund ETF                 | D                | ETF              |
| MBI           | MBIA INC.  | D                | Equity           |
| MBLY          | MOBILEYE GLOBAL, INC.                              | D                | Equity           |
| MBOT          | MICROBOT MEDICAL INC                               | D                | Equity           |
| MBUU          | Malibu Boats, Inc.                                 | D                | Equity           |
| MC            | Moelis & Company                                   | D                | Equity           |
| MCD           | MCDONALD'S CORPORATION                             | D                | Equity           |
| MCFT          | MasterCraft Boat Holdings, Inc                     | D                | Equity           |
| MCHI          | iShares MSCI China ETF                             | D                | ETF              |
| MCHP          | MICROCHIP TECHNOLOGY INC                           | D                | Equity           |
| MCK           | MCKESSON CORPORATION                               | D                | Equity           |
| MCO           | MOODY'S CORPORATION                                | D                | Equity           |
| MCRI          | MONRACH CASINO & RESORT, INC                       | D                | Equity           |
| MCW           | MISTER CAR WASH INC                                | D                | Equity           |
| MCY           | Mercury General Corporation                        | D                | Equity           |
| MD            | Mednax Inc   | D                | Equity           |
| MDB           | MongoDB, Inc.                                      | D                | Equity           |
| MDGL          | Madrigal Pharmaceuticals, Inc.                     | D                | Equity           |
| MDLZ          | MONDELEZ INTERNATIONAL, INC.                       | D                | Equity           |
| MDT           | MEDTRONIC, INC.                                    | D                | Equity           |
| MDU           | MDU RESOURCES GROUP INC.                           | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                         | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| MDWD          | MEDIWOUND LTD                               | D                | Equity           |
| MDXG          | MIMEDX GROUP, INC.                          | D                | Equity           |
| MDY           | SPDR S&P MIDCAP 400                         | D                | ETF              |
| MED           | Medifast, Inc.                              | D                | Equity           |
| MEDP          | Medpace Holdings, Inc                       | D                | Equity           |
| MEG           | Montrose Environmental Group, Inc           | D                | Equity           |
| MEI           | METHODE ELECTRONICS, INC.                   | D                | Equity           |
| MELI          | Mercadolibre Inc                            | D                | Equity           |
| MEOH          | Methanex Corp.                              | D                | Equity           |
| MERC          | Mercer International Inc.                   | D                | Equity           |
| MESA          | Mesa Air Group Inc                          | D                | Equity           |
| MESO          | Mesoblast Limited                           | D                | Equity           |
| MET           | METLIFE, INC.                               | D                | Equity           |
| META          | Meta Platforms, Inc.                        | D                | Equity           |
| METC          | RAMACO RESOURCES, INC.                      | D                | Equity           |
| METU          | DIREXION DAILY META BULL 2X ETF             | D                | ETF              |
| METV          | Roundhill Ball Metaverse ETF                | D                | ETF              |
| MEXX          | DIREXION DAILY MSCI MEXICO BULL 3X SHARES   | D                | Equity           |
| MFA           | MFA Financial Inc                           | D                | Equity           |
| MFC           | MANULIFE FINANCIAL CORPORATION              | D                | Equity           |
| MFIC          | MidCap Financial Investment Corporation     | D                | Equity           |
| MFIN          | Medallion Financial Corporation             | D                | Equity           |
| MG            | Mistras Group Inc                           | D                | Equity           |
| MGA           | Magna International Inc.                    | D                | Equity           |
| MGIC          | Magic Software Enterprises Ltd              | D                | Equity           |
| MGK           | Vanguard Mega Cap 300 Growth ETF            | D                | ETF              |
| MGM           | MGM RESORTS INTERNATIONAL                   | D                | Equity           |
| MGNI          | Magnite, Inc.                               | D                | Equity           |
| MGNX          | MacroGenics, Inc.                           | D                | Equity           |
| MGPI          | MGP Ingredients Inc.                        | D                | Equity           |
| MGTX          | MEIRAGTX HOLDINGS PLC                       | D                | Equity           |
| MGY           | Magnolia Oil & Gas Corporation              | D                | Equity           |
| MHK           | MOHAWK INDUSTRIES, INC.                     | D                | Equity           |
| MHO           | M/I Homes Inc                               | D                | Equity           |
| MIDD          | The Middleby Corporation                    | D                | Equity           |
| MIDU          | Direxionshares Daily Mid Cap Bull 3X Shares | D                | ETF              |
| MIR           | Mirion Technologies, Inc.                   | D                | Equity           |
| MIRM          | MIRUM PHARMACEUTICALS, INC.                 | D                | Equity           |
| MIST          | MILESTONE PHARMACEUTICALS, INC.             | D                | Equity           |
| MITK          | Mitek Systems, Inc.                         | D                | Equity           |
| MITT          | AG Mortgage Investment Trust, Inc.          | D                | Equity           |
| MJ            | ETFMG Alternative Harvest ETF               | D                | ETF              |
| MKC           | MCCORMICK AND COMPANY, INC.                 | D                | Equity           |
| MKL           | Markel Corporation                          | D                | Equity           |
| MKSI          | MKS Instruments, Inc.                       | D                | Equity           |
| MKTX          | MarketAxess Holdings Inc.                   | D                | Equity           |
| MLCO          | Melco Resorts & Entertainment Limited       | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                     | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| MLGO          | MICROALGO, INC.                         | D                | Equity           |
| MLI           | Mueller Industries Inc                  | D                | Equity           |
| MLKN          | MillerKnoll, Inc.                       | D                | Equity           |
| MLM           | MARTIN MARIETTA MATERIALS INC           | D                | Equity           |
| MLSS          | MILESTONE SCIENTIFIC, INC               | D                | Equity           |
| MLTX          | MOONLAKE IMMUNOTHERAPEUTICS             | D                | Equity           |
| MLYS          | MINERALYS THERAPEUTICS, INC.            | D                | Equity           |
| MMC           | MARSH & MCLENNAN INC                    | D                | Equity           |
| MMLP          | MARTIN MIDSTREAM PARTNERS LP            | D                | Equity           |
| MMM           | 3M COMPANY                              | D                | Equity           |
| MMS           | MAXIMUS, Inc.                           | D                | Equity           |
| MMSI          | Merit Medical Systems, Inc.             | D                | Equity           |
| MMYT          | MakeMyTrip Ltd                          | D                | Equity           |
| MNDY          | MONDAY.COM LTD                          | D                | Equity           |
| MNKD          | MANNKIND CORPORATION                    | D                | Equity           |
| MNMD          | MIND MEDICINE INC.                      | D                | Equity           |
| MNRO          | Monro, Inc.                             | D                | Equity           |
| MNSO          | MINISO GROUP HOLDING LTD.               | D                | Equity           |
| MNST          | MONSTER BEVERAGE CORPORATION            | D                | Equity           |
| MNY           | MoneyHero Limited                       | D                | Equity           |
| MO            | ALTRIA GROUP INC.                       | D                | Equity           |
| MOD           | Modine Manufacturing Company            | D                | Equity           |
| MODG          | Topgolf Callaway Brands Corporation     | D                | Equity           |
| MODV          | ModivCare Inc.                          | D                | Equity           |
| MOGO          | MOGO INC                                | D                | Equity           |
| MOH           | Molina Healthcare Inc.                  | D                | Equity           |
| MOMO          | Momo Inc.                               | D                | Equity           |
| MOS           | THE MOSAIC COMPANY                      | D                | Equity           |
| MOV           | Movado Group, Inc.                      | D                | Equity           |
| MP            | MP Materials Corporation                | D                | Equity           |
| MPAA          | Motorcar Parts of America, Inc.         | D                | Equity           |
| MPC           | MARATHON PETROLEUM CORPORATION          | D                | Equity           |
| MPLX          | MPLX LP                                 | D                | Equity           |
| MPW           | Medical Properties Trust Inc            | D                | Equity           |
| MPWR          | Monolithic Power Systems Inc            | D                | Equity           |
| MQ            | MARQETA, INC                            | D                | Equity           |
| MRAM          | EVERSPIN TECHNOLOGIES, INC.             | D                | Equity           |
| MRC           | MRC Global Inc.                         | D                | Equity           |
| MRCY          | Mercury Systems, Inc.                   | D                | Equity           |
| MREO          | MEREO BIOPHARMA GROUP PLC SPONSORED ADR | D                | Equity           |
| MRK           | MERCK & COMPANY INC.                    | D                | Equity           |
| MRNA          | Moderna, Inc.                           | D                | Equity           |
| MRP           | MILLROSE PROPERTIES INC.                | D                | Equity           |
| MRSN          | Mersana Therapeutics, Inc.              | D                | Equity           |
| MRTN          | Marten Transport, Ltd.                  | D                | Equity           |
| MRUS          | MERUS N.V.                              | D                | Equity           |
| MRVI          | Maravai LifeSciences Holdings, Inc.     | D                | Equity           |

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|---------------|--|------------------|------------------|
| MRVL          | MARVELL TECHNOLOGY GROUP LTD.                              | D                | Equity           |
| MRX           | MAREX GROUP PLC  | D                | Equity           |
| MS            | MORGAN STANLEY   | D                | Equity           |
| MSB           | Mesabi Trust   | D                | Equity           |
| MSCI          | MSCI Inc   | D                | Equity           |
| MSFT          | MICROSOFT CORPORATION                                      | D                | Equity           |
| MSFU          | Direxion Daily MSFT Bull 2X Shares                         | D                | ETF              |
| MSGE          | Madison Square Garden Entertainment Corp                   | D                | Equity           |
| MSGS          | Madison Square Garden Sports Corporation                   | D                | Equity           |
| MSI           | MOTOROLA INC (reverse split)                               | D                | Equity           |
| MSM           | MSC Industrial Direct Co. Inc.                             | D                | Equity           |
| MSOS          | ADVISOR SHARES PURE US CANNABIS                            | D                | ETF              |
| MSOX          | ADVISORSHARES MSOS 2X DAILY ETF                            | D                | ETF              |
| MSTR          | MICROSTRATEGY, INC   | D                | Equity           |
| MSTU          | T-Rex 2X Long MSTR Daily Target ETF                        | D                | ETF              |
| MSTX          | Tidal Trust II - Defiance Daily Target 1.75X Long MSTR ETF | D                | ETF              |
| MSTY          | YIELDMAX MSTR OPTION INCOME STRATEGY ETF                   | D                | ETF              |
| MSTZ          | T-Rex 2X Inverse MSTR Daily Target ETF                     | D                | ETF              |
| MT            | ARCELORMITTAL  | D                | Equity           |
| MTA           | METALLA ROYALTY & STREAMING LTD.                           | D                | Equity           |
| MTB           | M & T BANK CORP  | D                | Equity           |
| MTCH          | Match Group, Inc.  | D                | Equity           |
| MTDR          | Matador Resources Company                                  | D                | Equity           |
| MTG           | MGIC INVESTMENT CORPORATION                                | D                | Equity           |
| MTH           | MERITAGE HOMES CORPORATION                                 | D                | Equity           |
| MTLS          | MATERIALISE NV   | D                | Equity           |
| MTN           | Vail Resorts, Inc.   | D                | Equity           |
| MTRX          | Matrix Service Company                                     | D                | Equity           |
| MTSI          | MACOM Technology Solutions Holdings, Inc.                  | D                | Equity           |
| MTUM          | Altria Group, Inc  | D                | ETF              |
| MTW           | THE MANITOWOC COMPANY, INC.                                | D                | Equity           |
| MTZ           | MASTEC INC   | D                | Equity           |
| MU            | MICRON TECHNOLOGY INC.                                     | D                | Equity           |
| MUB           | iShares S&P National AMT Free Municipal Bond Fund          | D                | ETF              |
| MUFG          | Mitsubishi UFJ Financial Group, Inc.                       | D                | Equity           |
| MUR           | MURPHY OIL CORPORATION                                     | D                | Equity           |
| MURA          | MURAL ONCOLOGY PLC   | D                | Equity           |
| MUSA          | Murphy USA Inc.  | D                | Equity           |
| MUX           | McEwen Mining Inc.   | D                | Equity           |
| MVIS          | Microvision, Inc.  | D                | Equity           |
| MVO           | MV Oil Trust   | D                | Equity           |
| MVST          | Microvast Holdings, Inc. (MVST)                            | D                | Equity           |
| MWA           | Mueller Water Products, Inc.                               | D                | Equity           |
| MX            | MagnaChip Semiconductor Corp.                              | D                | Equity           |
| MXL           | Maxlinear, Inc.  | D                | Equity           |
| MYGN          | MYRIAD GENETICS INC  | D                | Equity           |
| MYO           | MYOMO, INC.  | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                   | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| MYPS          | PLAYSTUDIOS, Inc.                                     | D                | Equity           |
| NABL          | N-ABLE, INC   | D                | Equity           |
| NAGE          | Niagen Bioscience, Inc.                               | D                | Equity           |
| NAIL          | Direxion Daily Homebuilders & Supplies Bull 3X Shares | D                | ETF              |
| NAK           | Northern Dynasty Minerals Ltd.                        | D                | Equity           |
| NAMS          | NEWAMSTERDAM PHARMA COMPANY N.V.                      | D                | Equity           |
| NANC          | UNUSUAL WHALES SUBVERSIVE DEMOCRATIC TRADING ETF      | D                | ETF              |
| NAT           | Nordic American Tankers Ltd                           | D                | Equity           |
| NATL          | NCR ATLEOS, LLC                                       | D                | Equity           |
| NAUT          | Nautilus Biotechnology, Inc.                          | D                | Equity           |
| NAVI          | NAVIENT CORPORATION                                   | D                | Equity           |
| NB            | NIOCORP DEVELOPMENTS LTD.                             | D                | Equity           |
| NBIS          | Nebius Group N.V.                                     | D                | Equity           |
| NBIX          | NEUROCRINE BIOSCIENCES                                | D                | Equity           |
| NBR           | NABORS INDUSTRIES LTD.                                | D                | Equity           |
| NCLH          | NORWEGIAN CRUISE LINE HOLDINGS LTD.                   | D                | Equity           |
| NCMI          | National Cinenedia Inc                                | D                | Equity           |
| NCNO          | nCino, Inc  | D                | Equity           |
| NDAQ          | Nasdaq OMX Group                                      | D                | Equity           |
| NDLS          | NOODLES & COMPANY                                     | D                | Equity           |
| NDSN          | Nordson Corporation                                   | D                | Equity           |
| NE            | NOBLE CORPORATION                                     | D                | Equity           |
| NEE           | NextEra Energy, Inc.                                  | D                | Equity           |
| NEM           | NEWMONT MINING CORPORATION                            | D                | Equity           |
| NEO           | NeoGenomics, Inc.                                     | D                | Equity           |
| NEOG          | Neogen Corp   | D                | Equity           |
| NEON          | NEONODE INC.  | D                | Equity           |
| NET           | Cloudflare, Inc.                                      | D                | Equity           |
| NEWP          | NEW PACIFIC METALS CORP                               | D                | Equity           |
| NEWT          | Newtek Business Services Corp                         | D                | Equity           |
| NEXA          | NEXA RESOURCES S.A.                                   | D                | Equity           |
| NEXT          | NEXTDECADE CORP.                                      | D                | Equity           |
| NFE           | New Fortress Energy Inc                               | D                | Equity           |
| NFG           | National Fuel Gas Company                             | D                | Equity           |
| NFGC          | NEW FOUND GOLD  | D                | Equity           |
| NFLU          | T-REX 2X LONG NFLX DAILY TARGET ETF                   | D                | ETF              |
| NFLX          | NETFLIX, INC.   | D                | Equity           |
| NG            | NOVAGOLD RESOURCES INC (dist)                         | D                | Equity           |
| NGD           | NEW GOLD, INC.  | D                | Equity           |
| NGG           | National Grid PLC                                     | D                | Equity           |
| NGL           | NGL ENERGY PARTNERS L.P.                              | D                | Equity           |
| NGNE          | Neurogene Inc.  | D                | Equity           |
| NGS           | Natural Gas Services Group                            | D                | Equity           |
| NI            | NISOURCE, INC   | D                | Equity           |
| NICE          | NICE Ltd.   | D                | Equity           |
| NINE          | NINE ENERGY SERVICE INC                               | D                | Equity           |
| NIO           | NIO Inc.  | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                       | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| NIU           | Niu Technologies                          | D                | Equity           |
| NKE           | NIKE INC.                                 | D                | Equity           |
| NKTR          | NEKTAR THERAPEUTICS                       | D                | Equity           |
| NKTX          | NKARTA INC                                | D                | Equity           |
| NLY           | ANNALY CAPITAL MANAGEMENT, INC.           | D                | Equity           |
| NMAX          | Newsmax, Inc.                             | D                | Equity           |
| NMFC          | New Mountain Finance Corporation          | D                | Equity           |
| NMG           | NOUVEAU MONDE GRAPHITE INC                | D                | Equity           |
| NMIH          | NMI Holdings, Inc.                        | D                | Equity           |
| NMM           | Navios Maritime Partners LP               | D                | Equity           |
| NMR           | Nomura Holdings, Inc.                     | D                | Equity           |
| NMRA          | NEUMORA THERAPEUTICS INC                  | D                | Equity           |
| NMRK          | Newmark Group Inc                         | D                | Equity           |
| NMTC          | NEUROONE MEDICAL TECHNOLOGIES CORPORATION | D                | Equity           |
| NN            | NEXTNAV INC.                              | D                | Equity           |
| NNBR          | NN, Inc.                                  | D                | Equity           |
| NNDM          | NANO DIMENSION LTD                        | D                | Equity           |
| NNE           | NANO Nuclear Energy Inc.                  | D                | Equity           |
| NNN           | National Retail Properties, Inc.          | D                | Equity           |
| NNOX          | NANO-X IMAGING LTD                        | D                | Equity           |
| NNVC          | NanoViricides, Inc                        | D                | Equity           |
| NOAH          | Noah Holdings, Ltd.                       | D                | Equity           |
| NOC           | NORTHROP GRUMMAN CORP                     | D                | Equity           |
| NOG           | Northern Oil and Gas Inc                  | D                | Equity           |
| NOK           | NOKIA CORPORATION                         | D                | Equity           |
| NOMD          | Nomad Foods Limited                       | D                | Equity           |
| NOTE          | FISCALNOTE HOLDINGS, INC.                 | D                | Equity           |
| NOTV          | INOTIV, INC.                              | D                | Equity           |
| NOV           | NOV, Inc.                                 | D                | Equity           |
| NOVA          | Sunnova Energy International Inc          | D                | Equity           |
| NOVT          | Novanta Inc.                              | D                | Equity           |
| NOW           | ServiceNow Inc.                           | D                | Equity           |
| NPO           | EnPro Industries Inc                      | D                | Equity           |
| NPWR          | NET Power Inc.                            | D                | Equity           |
| NRDS          | NERDWALLET, INC                           | D                | Equity           |
| NRDY          | Nerdy Inc.                                | D                | Equity           |
| NRG           | NRG ENERGY, INC.                          | D                | Equity           |
| NRGV          | Energy Vault Holdings, Inc                | D                | Equity           |
| NRIX          | NURIX THERAPEUTICS, INC.                  | D                | Equity           |
| NRP           | Natural Resource Partners L.P.            | D                | Equity           |
| NRXP          | NRX PHARMACEUTICALS, INC                  | D                | Equity           |
| NSA           | National Storage Affiliates               | D                | Equity           |
| NSC           | NORFOLK SOUTHERN CORPORATION              | D                | Equity           |
| NSP           | Insperity, Inc.                           | D                | Equity           |
| NSSC          | Napco Security Technologies, Inc.         | D                | Equity           |
| NTAP          | NETAPP, INC.                              | D                | Equity           |
| NTCT          | NetScout Systems, Inc.                    | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                             | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| NTES          | NETEASE, INC.                                   | D                | Equity           |
| NTGR          | NETGEAR INC                                     | D                | Equity           |
| NTLA          | Intellia Therapeutics Inc.                      | D                | Equity           |
| NTNX          | Nutanix, Inc.                                   | D                | Equity           |
| NTR           | Nutrien Ltd.                                    | D                | Equity           |
| NTRA          | Natera, Inc                                     | D                | Equity           |
| NTRS          | NORTHERN TRUST CORPORATIO                       | D                | Equity           |
| NTWK          | NetSol Technologies, Inc.                       | D                | Equity           |
| NU            | NU HOLDINGS LTD.                                | D                | Equity           |
| NUE           | NUCOR CORPORATION                               | D                | Equity           |
| NUGT          | DIREXION DAILY GOLD MINERS BULL 3X SHRS         | D                | ETF              |
| NUS           | NU SKIN ENTERPRISES INC.                        | D                | Equity           |
| NUVB          | NUVATION BIO INC COM CL A                       | D                | Equity           |
| NUVL          | NUVALENT, INC.                                  | D                | Equity           |
| NVAX          | NOVAVAX, INC                                    | D                | Equity           |
| NVCR          | NovoCure Limited                                | D                | Equity           |
| NVCT          | NUVECTIS PHARMA, INC.                           | D                | Equity           |
| NVD           | GraniteShares ETF Trust 2x Short NVDA Daily ETF | D                | ETF              |
| NVDA          | NVIDIA CORPORATION                              | D                | Equity           |
| NVDL          | GRANITESHARES 1.5X LONG NVDA DAILY ETF          | D                | ETF              |
| NVDQ          | T-REX 2X INVERSE NVIDIA DAILY TARGET            | D                | ETF              |
| NVDS          | AXS 1.25X NVDA BEAR DAILY ETF                   | D                | ETF              |
| NVDU          | DIREXION DAILY NVDA BULL 1.5X SHARES            | D                | ETF              |
| NVDX          | T-REX 2X LONG NVIDIA DAILY                      | D                | ETF              |
| NVDY          | YIELDMAX NVDA OPTION INCOME STRATEGY ETF        | D                | ETF              |
| NVEE          | NV5 Global Inc.                                 | D                | Equity           |
| NVGS          | NAVIGATOR HOLDINGS LTD.                         | D                | Equity           |
| NVMI          | Nova Measuring Instruments Ltd.                 | D                | Equity           |
| NVNO          | enVVeno Medical Corporation                     | D                | Equity           |
| NVO           | Novo Nordisk                                    | D                | Equity           |
| NVRI          | Enviri Corporation                              | D                | Equity           |
| NVS           | Novartis AG                                     | D                | Equity           |
| NVST          | Envista Holdings Corp                           | D                | Equity           |
| NVT           | nVent Electric plc                              | D                | Equity           |
| NVTS          | NAVITAS SEMICONDUCTOR CORPORATION               | D                | Equity           |
| NWBI          | Northwest Bancshares Inc                        | D                | Equity           |
| NWG           | NatWest Group plc                               | D                | Equity           |
| NWL           | NEWELL RUBBERMAID, INC.                         | D                | Equity           |
| NWSA          | NEWS CORPORATION                                | D                | Equity           |
| NX            | Quanex Building Products Corporation            | D                | Equity           |
| NXE           | NEXGEN ENERGY LTNEXGEN ENERGY LTD.D.            | D                | Equity           |
| NXPI          | NXP Semiconductors NV                           | D                | Equity           |
| NXST          | NEXSTAR BROADCASTING GROUP, INC.                | D                | Equity           |
| NXT           | NEXTRACKER INC.                                 | D                | Equity           |
| NYMT          | New York Mortgage Trust, Inc.                   | D                | Equity           |
| NYT           | NEW YORK TIMES COMPANY                          | D                | Equity           |
| O             | Realty Income Corporation                       | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                            | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| OABI          | OMNIAB, INC.                                   | D                | Equity           |
| OB            | OUTOUTBRAIN INCBRAIN INC                       | D                | Equity           |
| OBDC          | Blue Owl Capital Corporation                   | D                | Equity           |
| OBE           | OBSIDIAN ENERGY LTD                            | D                | Equity           |
| OC            | OWENS CORNING INC.                             | D                | Equity           |
| OCFT          | ONECONNECT FINANCIAL TECHNOLOGY CO LTD         | D                | Equity           |
| OCGN          | OCUGEN INC                                     | D                | Equity           |
| OCSL          | Oaktree Specialty Lending Corporation          | D                | Equity           |
| OCUL          | Ocular Therapeutix, Inc.                       | D                | Equity           |
| ODD           | ODDITY TECH LTD                                | D                | Equity           |
| ODFL          | Old Dominion Freight Line (150 shares)         | D                | Equity           |
| ODP           | The ODP Corporation                            | D                | Equity           |
| ODV           | OSISKO DEVELOPMENT CORP                        | D                | Equity           |
| OEC           | Orion Engineered Carbons S.A.                  | D                | Equity           |
| OEF           | ISHARES S&P 100 ETF                            | D                | ETF              |
| OGE           | OGE ENERGY CORP.                               | D                | Equity           |
| OGI           | OrganiGram Holdings Inc                        | D                | Equity           |
| OGN           | ORGANON & CO.                                  | D                | Equity           |
| OHI           | OMEGA Healthcare Investors, Inc.               | D                | Equity           |
| OI            | OWENS-ILLINOIS INC.                            | D                | Equity           |
| OIH           | MARKET VECTORS OIL SERVICES ETF                | D                | ETF              |
| OII           | OCEANEERING INTERNATIONAL, INC                 | D                | Equity           |
| OIS           | Oil States International, Inc.                 | D                | Equity           |
| OKE           | ONEOK, INC.                                    | D                | Equity           |
| OKLO          | Oklo Inc.                                      | D                | Equity           |
| OKTA          | Okta, Inc.                                     | D                | Equity           |
| OLED          | CAMBRIDGE DISPLAY TECHNOLOGY INC.              | D                | Equity           |
| OLLI          | Ollie's Bargain Outlet Holdings, Inc.          | D                | Equity           |
| OLMA          | Aurora Innovation, Inc.                        | D                | Equity           |
| OLN           | OLIN CORP.                                     | D                | Equity           |
| OLO           | OLO, INC.                                      | D                | Equity           |
| OLPX          | OLAPLEX HOLDINGS INC                           | D                | Equity           |
| OMAB          | GRUPO AEROPORTUARIO DEL CENTRO NORTE SAB DE CV | D                | Equity           |
| OMC           | OMNICOM GROUP                                  | D                | Equity           |
| OMCL          | OMNICELL, INC                                  | D                | Equity           |
| OMER          | Omeros Corporation                             | D                | Equity           |
| OMEX          | Odyssey Marine Exploration Inc.                | D                | Equity           |
| OMF           | OneMain Holdings, Inc.                         | D                | Equity           |
| OMI           | OWENS & MINOR, INC                             | D                | Equity           |
| ON            | ON Semiconductor Corporation                   | D                | Equity           |
| ONB           | Old National Bancorp                           | D                | Equity           |
| ONC           | BeiGene, Ltd.                                  | D                | Equity           |
| ONDS          | ONDAS HOLDINGS, INC.                           | D                | Equity           |
| ONEQ          | FIDELITY NASDAQ COMPOSITE INDEX ETF            | D                | ETF              |
| ONEW          | ONEWATER MARINE INC                            | D                | Equity           |
| ONL           | ORION OFFICE REIT INC                          | D                | Equity           |
| ONON          | ON HOLDING AG                                  | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                    | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| ONTF          | ON24, INC                              | D                | Equity           |
| ONTO          | Onto Innovation Inc.                   | D                | Equity           |
| OPAD          | Offerpad Solutions Inc.                | D                | Equity           |
| OPCH          | Option Care Health, Inc                | D                | Equity           |
| OPEN          | Opendoor Technologies Inc.             | D                | Equity           |
| OPFI          | OppFi Inc.                             | D                | Equity           |
| OPI           | (New) Office Properties Income Trust   | D                | Equity           |
| OPK           | OPKO HEALTH, INC.                      | D                | Equity           |
| OPRA          | Opera Limited                          | D                | Equity           |
| OPRT          | OPORTUN FINANCIAL CORP.                | D                | Equity           |
| OPRX          | OptimizeRx Corporation                 | D                | Equity           |
| OPTT          | OCEAN POWER TECHNOLOGIES, INC.         | D                | Equity           |
| OPY           | Oppenheimer Holdings Inc.              | D                | Equity           |
| OR            | Osisko Gold Royalties Ltd              | D                | Equity           |
| ORA           | Ormat Technologies, Inc.               | D                | Equity           |
| ORC           | Orchid Island Capital, Inc.            | D                | Equity           |
| ORCL          | ORACLE CORPORATION                     | D                | Equity           |
| ORGN          | Origin Materials, Inc.                 | D                | Equity           |
| ORGO          | ORGANOGENESIS HOLDINGS, INC.           | D                | Equity           |
| ORI           | Old Republic International Corporation | D                | Equity           |
| ORIC          | ORIC PHARMACEUTICALS INC               | D                | Equity           |
| ORLA          | ORLA MINING LTD                        | D                | Equity           |
| ORLY          | O'REILLY AUTOMOTIVE INC.               | D                | Equity           |
| ORMP          | Oramed Pharmaceuticals Inc.            | D                | Equity           |
| ORN           | Orion Marine Group, Inc.               | D                | Equity           |
| OS            | ONESTREAM, INC.                        | D                | Equity           |
| OSCR          | OSCAR HEALTH INC.                      | D                | Equity           |
| OSIS          | OSI Systems Inc.                       | D                | Equity           |
| OSK           | Oshkosh Corporation                    | D                | Equity           |
| OSPN          | OneSpan Inc.                           | D                | Equity           |
| OSS           | ONE STOP SYSTEMS, INC.                 | D                | Equity           |
| OSUR          | ORASURE TECHNOLOGIES INC               | D                | Equity           |
| OSW           | OneSpaWorld Holdings Limited           | D                | Equity           |
| OTEX          | OPEN TEXT CORPORATION                  | D                | Equity           |
| OTIS          | Otis Worldwide Corporation             | D                | Equity           |
| OTLK          | OUTLOOK THERAPEUTICS, INC.             | D                | Equity           |
| OTLY          | OATLY GROUP AB                         | D                | Equity           |
| OUST          | Ouster, Inc                            | D                | Equity           |
| OUT           | OUTFRONT MEDIA INC.                    | D                | Equity           |
| OVID          | Ovid Therapeutics Inc.                 | D                | Equity           |
| OVV           | Ovintiv Inc.                           | D                | Equity           |
| OWL           | Blue Owl Capital Inc.                  | D                | Equity           |
| OXM           | Oxford Industries, Inc                 | D                | Equity           |
| OXSQ          | Oxford Square Capital Corporation      | D                | Equity           |
| OXY           | OCCIDENTAL PETROLEUM CORPORATION       | D                | Equity           |
| OZK           | Bank OZK                               | D                | Equity           |
| PAA           | PLAINS ALL AMERICAN PIPELINE, LP       | D                | Equity           |

| Emerald Securities List as of 6/2/2025 |   |           |           |
|--|---|-----------|-----------|
| Symbol                                 | Company Name                                    | List Exch | Inst Type |
| PAAS                                   | PAN AMERICAN SILVER CORPORATION                 | D         | Equity    |
| PACB                                   | Pacific Biosciences of California Inc           | D         | Equity    |
| PACK                                   | RANPAK HOLDINGS CORP                            | D         | Equity    |
| PACS                                   | PACS Group, Inc.                                | D         | Equity    |
| PAG                                    | Penske Automotive Group Inc                     | D         | Equity    |
| PAGP                                   | PLAINS GP HOLDINGS, L.P.                        | D         | Equity    |
| PAGS                                   | PagSeguro Digital Ltd.                          | D         | Equity    |
| PAM                                    | Pampa Energía S.A.                              | D         | Equity    |
| PANL                                   | PANGAEA LOGISTICS SOLUTIONS LTD.                | D         | Equity    |
| PANW                                   | Palo Alto Networks Inc                          | D         | Equity    |
| PAR                                    | PAR Technology Corporation                      | D         | Equity    |
| PARA                                   | Paramount Global Class B                        | D         | Equity    |
| PARR                                   | Par Pacific Holdings, Inc.                      | D         | Equity    |
| PASG                                   | Passage Bio, Inc.                               | D         | Equity    |
| PATH                                   | UIPATH INC                                      | D         | Equity    |
| PATK                                   | Patrick Industries, Inc.                        | D         | Equity    |
| PAVE                                   | Global X U.S. Infrastructure Development ETF    | D         | ETF       |
| PAVM                                   | PAVMED INC                                      | D         | Equity    |
| PAX                                    | PATRIA INVESTMENT LTD                           | D         | Equity    |
| PAY                                    | PAYMENTUS HOLDINGS, INC                         | D         | Equity    |
| PAYC                                   | Paycom Software, Inc.                           | D         | Equity    |
| PAYO                                   | Payoneer Global Inc.                            | D         | Equity    |
| PAYS                                   | PaySign, Inc.                                   | D         | Equity    |
| PAYX                                   | PAYCHEX, INC                                    | D         | Equity    |
| PBA                                    | Pembina Pipeline Corporation                    | D         | Equity    |
| PBF                                    | PBF ENERGY INC.                                 | D         | Equity    |
| PBI                                    | PITNEY BOWES INC.                               | D         | Equity    |
| PBPB                                   | POTBELLY CORPORATION                            | D         | Equity    |
| PBR                                    | PETROLEO BRASILEIRO PETROBRAS SA                | D         | Equity    |
| PBT                                    | PERMIAN BASIN ROYALTY TRUST                     | D         | Equity    |
| PBYI                                   | PUMA BIOTECHNOLOGY, INC.                        | D         | Equity    |
| PCAR                                   | PACCAR INC.                                     | D         | Equity    |
| PCG                                    | PG & E CORP                                     | D         | Equity    |
| PCH                                    | PotlatchDeltic Corporation                      | D         | Equity    |
| PCOR                                   | PROCORE TECH.                                   | D         | Equity    |
| PCRX                                   | Pacira Pharmaceuticals, Inc./DE                 | D         | Equity    |
| PCT                                    | PURECYCLE TECHNOLOGIES INC                      | D         | Equity    |
| PCTY                                   | Paylocity Holding Corporation                   | D         | Equity    |
| PCVX                                   | VAXCYTE, INC.                                   | D         | Equity    |
| PD                                     | PagerDuty, Inc.                                 | D         | Equity    |
| PDBC                                   | INVESCO OPTIMUM YIELD DIVER STRATEGY NO K-1 ETF | D         | ETF       |
| PDD                                    | Pinduoduo Inc.                                  | D         | Equity    |
| PDS                                    | Precision Drilling Corporation                  | D         | Equity    |
| PDSB                                   | PDS BIOTECHNOLOGY CORP.                         | D         | Equity    |
| PDYN                                   | PALLADYNE AI CORP.                              | D         | Equity    |
| PEB                                    | Pebblebrook Hotel Trust                         | D         | Equity    |
| PEG                                    | PUBLIC SERVICE ENT GROUP INC                    | D         | Equity    |

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| <b>Symbol</b> | <b>Company Name</b>                               | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| PEGA          | Pegasystems, Inc.                                 | D                | Equity           |
| PEN           | Penumbra, Inc                                     | D                | Equity           |
| PENG          | Penguin Solutions, Inc.                           | D                | Equity           |
| PENN          | PENN NATIONAL GAMING INC                          | D                | Equity           |
| PEP           | PEPSICO, INC.                                     | D                | Equity           |
| PERI          | Perion Network Ltd.                               | D                | Equity           |
| PESI          | Perma-Fix Environmental Services, Inc.            | D                | Equity           |
| PETS          | PETMED EXPRESS, INC.                              | D                | Equity           |
| PEY           | Invesco High Yield Equity Dividend Achievers ETF  | D                | ETF              |
| PFE           | PFIZER INC.                                       | D                | Equity           |
| PFF           | iShares US Preferred Stock                        | D                | ETF              |
| PFFD          | GLOBAL X U.S. PREFERRED ETF                       | D                | ETF              |
| PFG           | PRINCIPAL FINANCIAL GROUP, INC.                   | D                | Equity           |
| PFGC          | Performance Food Group Company                    | D                | Equity           |
| PFLT          | Pennantpark Floating Rate Capital Ltd             | D                | Equity           |
| PFSI          | PennyMac Financial Services, Inc.                 | D                | Equity           |
| PG            | PROCTER & GAMBLE COMPANY                          | D                | Equity           |
| PGEN          | Precigen, Inc.                                    | D                | Equity           |
| PGF           | PowerShares Financial Preferred ETF               | D                | ETF              |
| PGJ           | PowerShares Golden Dragon China Portfolio         | D                | ETF              |
| PGNY          | Progyny Inc                                       | D                | Equity           |
| PGR           | PROGRESSIVE CORPORATION                           | D                | Equity           |
| PGY           | PAGAYA TECHNOLOGIES LTD                           | D                | Equity           |
| PH            | PARKER-HANNIFIN CORP                              | D                | Equity           |
| PHAT          | PHATHOM PHARMACEUTICALS, INC.                     | D                | Equity           |
| PHG           | Koninklijke Philips N.V                           | D                | Equity           |
| PHIN          | PHINIA INC.                                       | D                | Equity           |
| PHM           | PULTEGROUP, INC.                                  | D                | Equity           |
| PHR           | PHREESIA, INC.                                    | D                | Equity           |
| PHUN          | PHUNWARE, INC.                                    | D                | Equity           |
| PI            | Impinj, Inc.                                      | D                | Equity           |
| PICK          | iShares MSCI Global Metals & Mining Producers ETF | D                | ETF              |
| PII           | POLARIS INDUSTRIES, INC.                          | D                | Equity           |
| PINC          | Premier Inc                                       | D                | Equity           |
| PINS          | Pinterest, Inc.                                   | D                | Equity           |
| PIPR          | Piper Sandler Companies                           | D                | Equity           |
| PJT           | PJT Partners Inc.                                 | D                | Equity           |
| PK            | Park Hotels & Resorts Inc.                        | D                | Equity           |
| PKE           | Park Aerospace Corp.                              | D                | Equity           |
| PKG           | PACKAGING CORP OF AMERICA                         | D                | Equity           |
| PKX           | POSCO   | D                | Equity           |
| PL            | Planet Labs PBC                                   | D                | Equity           |
| PLAB          | Photronics Inc.                                   | D                | Equity           |
| PLAY          | Dave & Buster's Entertainment, Inc.               | D                | Equity           |
| PLBY          | PLBY GROUP, INC.                                  | D                | Equity           |
| PLCE          | CHILDREN'S PLACE RETAIL                           | D                | Equity           |
| PLD           | PROLOGIS INC.                                     | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                      | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| PLG           | PLATINUM GROUP METALS LTD.               | D                | Equity           |
| PLL           | PIEDMONT LITHIUM LTD                     | D                | Equity           |
| PLMR          | Palomar Holdings, Inc                    | D                | Equity           |
| PLNT          | Planet Fitness, Inc.                     | D                | Equity           |
| PLRX          | PLIANT THERAPEUTICS, INC.                | D                | Equity           |
| PLSE          | Pulse Biosciences, Inc.                  | D                | Equity           |
| PLTK          | PLAYTIKA HOLDING CORP.                   | D                | Equity           |
| PLTR          | Palantir Technologies Inc.               | D                | Equity           |
| PLTY          | YIELDMAX PLTR OPTION INCOME STRATEGY ETF | D                | ETF              |
| PLUG          | PLUG POWER INC                           | D                | Equity           |
| PLX           | Protalix BioTherapeutics Inc.            | D                | Equity           |
| PLYA          | Playa Hotels & Resorts N.V.              | D                | Equity           |
| PM            | PHILIP MORRIS INTERNATIONAL, INC.        | D                | Equity           |
| PMT           | Pennymac Mortgage Investment Trust       | D                | Equity           |
| PNC           | PNC FINANCIAL SERVICES GROUP INC.        | D                | Equity           |
| PNFP          | Pinnacle Financial Partners, Inc.        | D                | Equity           |
| PNNT          | PennantPark Investment Corp              | D                | Equity           |
| PNR           | Pentair plc                              | D                | Equity           |
| PNW           | Pinnacle West Capital Corporation        | D                | Equity           |
| PODD          | Insulet Corporation                      | D                | Equity           |
| POET          | POET Technologies Inc.                   | D                | Equity           |
| PONY          | PONY AI INC.                             | D                | Equity           |
| POOL          | Pool Corporation                         | D                | Equity           |
| POR           | PORTLAND GENERAL ELECTRIC COMPANY        | D                | Equity           |
| POST          | Post Holdings, Inc.                      | D                | Equity           |
| POWI          | Power Integrations Inc                   | D                | Equity           |
| POWL          | POWELL INDUSTRIES, INC.                  | D                | Equity           |
| POWW          | AMMO INC                                 | D                | Equity           |
| PPA           | INVESCO AEROSPACE & DEFENSE ETF          | D                | ETF              |
| PPC           | PILGRIMS PRIDE CORP                      | D                | Equity           |
| PPG           | PPG INDUSTRIES INC.                      | D                | Equity           |
| PPH           | Market Vectors Pharmaceutical ETF        | D                | ETF              |
| PPL           | PPL CORPORATION                          | D                | Equity           |
| PPTA          | PERPETUA RESOURCES CORP.                 | D                | Equity           |
| PR            | Permian Resources Corporation            | D                | Equity           |
| PRA           | ProAssurance Corporation                 | D                | Equity           |
| PRAA          | PRA GROUP, INC.                          | D                | Equity           |
| PRAX          | PRAXIS PRECISION MEDICINES, INC.         | D                | Equity           |
| PRCH          | PORCH GROUP, INC.                        | D                | Equity           |
| PRCT          | PROCEPT BIOROBOTICS CORP.                | D                | Equity           |
| PRDO          | Perdoceo Education Corporation           | D                | Equity           |
| PRG           | PROG Holdings, Inc.                      | D                | Equity           |
| PRGO          | PERRIGO COMPANY                          | D                | Equity           |
| PRGS          | Progress Software Corporation            | D                | Equity           |
| PRIM          | Primoris Services Corporation            | D                | Equity           |
| PRKS          | o United Parks & Resorts Inc.            | D                | Equity           |
| PRLB          | Proto Labs Inc                           | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                           | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| PRLD          | PRELUDE THERAPEUTICS, INC.                    | D                | Equity           |
| PRM           | PERIMETER SOLUTIONS SA                        | D                | Equity           |
| PRMB          | Primo Brands Corporation                      | D                | Equity           |
| PRME          | PRIME MEDICINE, INC.                          | D                | Equity           |
| PRO           | Pros Holdings Inc                             | D                | Equity           |
| PROK          | PROKIDNEY CORP. CLASS A                       | D                | Equity           |
| PROP          | PRAIRIE OPERATING CO.                         | D                | Equity           |
| PRPH          | PROPHASE LABS, INC                            | D                | Equity           |
| PRPL          | Purple Innovation, Inc.                       | D                | Equity           |
| PRQR          | Proqr Therapeutics N.V.                       | D                | Equity           |
| PRTA          | PROTHENA CORPORATION PLC                      | D                | Equity           |
| PRTS          | CarParts.com, Inc                             | D                | Equity           |
| PRU           | PRUDENTIAL FINANCIAL, INC.                    | D                | Equity           |
| PRVA          | PRIVIA HEALTH GROUP INC                       | D                | Equity           |
| PSA           | Public Storage                                | D                | Equity           |
| PSEC          | Prospect Captial Corporation                  | D                | Equity           |
| PSFE          | Paysafe Limited                               | D                | Equity           |
| PSMT          | PriceSmart, Inc.                              | D                | Equity           |
| PSN           | Parsons Corporation                           | D                | Equity           |
| PSNL          | PERSONALIS, INC.                              | D                | Equity           |
| PSNY          | Polestar Automotive Holding UK PLC            | D                | Equity           |
| PSQ           | ProShares Short QQQ                           | D                | ETF              |
| PSQH          | PSQ Holdings, Inc. (PSQH)                     | D                | Equity           |
| PSTG          | Pure Storage, Inc.                            | D                | Equity           |
| PSTL          | POSTAL REALTY TRUST INC CL A                  | D                | Equity           |
| PSX           | PHILLIPS 66                                   | D                | Equity           |
| PTC           | PTC Inc.                                      | D                | Equity           |
| PTCT          | PTC Therapeutics, Inc.                        | D                | Equity           |
| PTEN          | PATTERSON-UTI ENERGY INC.                     | D                | Equity           |
| PTF           | Invesco Dorsey Wright Technology Momentum ETF | D                | ETF              |
| PTGX          | PROTAGONIST THERAPEUTICS, INC.                | D                | Equity           |
| PTIR          | GraniteShares 2x Long PLTR Daily ETF          | D                | ETF              |
| PTLO          | PORTILLOS INC                                 | D                | Equity           |
| PTON          | Peloton Interactive, Inc.                     | D                | Equity           |
| PUBM          | PUBMATIC INC                                  | D                | Equity           |
| PUMP          | ProPetro Holding Corp.                        | D                | Equity           |
| PVBC          | PROVIDENT BANCORP INC                         | D                | Equity           |
| PVH           | PVH Corp.                                     | D                | Equity           |
| PVL           | Permianville Royalty Trust                    | D                | Equity           |
| PWR           | QUANTA SERVICES, INC.                         | D                | Equity           |
| PX            | P10, INC.                                     | D                | Equity           |
| PXLW          | PIXELWORKS, INC.                              | D                | Equity           |
| PYPL          | PayPal Holdings, Inc.                         | D                | Equity           |
| PYXS          | PYXIS ONCOLOGY, INC.                          | D                | Equity           |
| PZZA          | Papa John's International, Inc.               | D                | Equity           |
| QBTS          | D-WAVE QUANTUM INC.                           | D                | Equity           |
| QCOM          | QUALCOMM INCORPORATED                         | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                     | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| QD            | Qudian, Inc.  | D                | Equity           |
| QDEL          | QUIDEL CORPORATION                                      | D                | Equity           |
| QDTE          | Roundhill Innovation-100 ODTE Covered Call Strategy ETF | D                | ETF              |
| QFIN          | 360 DIGITECH, INC.                                      | D                | Equity           |
| QGEN          | QIAGEN N V  | D                | Equity           |
| QID           | PROSHARES ULTRASHORT QQQ                                | D                | ETF              |
| QIPT          | QUIPT HOME MEDICAL CORP                                 | D                | Equity           |
| QLD           | PROSHARES ULTRA QQQ                                     | D                | ETF              |
| QLYS          | QUALYS, INC.  | D                | Equity           |
| QNCX          | Quince Therapeutics, Inc                                | D                | Equity           |
| QNST          | Quinstreet, Inc.  | D                | Equity           |
| QQQ           | INVESCO QQQ Trust                                       | D                | ETF              |
| QQQE          | Direxion NASDAQ-100 Equal Weighted Index Shares         | D                | ETF              |
| QQQJ          | INVESCO NASDAQ NEXT GEN 100 ETF                         | D                | Equity           |
| QQQM          | INVESCO NASDAQ 100 ETF                                  | D                | ETF              |
| QQQY          | DEFIANCE NASDAQ 100 ENHANCED OPTIONS INCOME ETF         | D                | ETF              |
| QRHC          | QUEST RESOURCE HOLDING CORPORATION                      | D                | Equity           |
| QRVO          | Qorvo, Inc.   | D                | Equity           |
| QS            | QuantumScape Corporation                                | D                | Equity           |
| QSI           | Quantum-Si Incorporated                                 | D                | Equity           |
| QSR           | Restaurant Brands International Inc.                    | D                | Equity           |
| QTRX          | QUANTERIX CORPORATION                                   | D                | Equity           |
| QTTB          | Q32 BIO INC.  | D                | Equity           |
| QTUM          | DEFIANCE QUANTUM ETF                                    | D                | ETF              |
| QTWO          | Q2 Holdings, Inc.                                       | D                | Equity           |
| QUAD          | Quad/Graphics, Inc.                                     | D                | Equity           |
| QUAL          | iShares MSCI USA Quality Factor ETF                     | D                | ETF              |
| QUBT          | QUANTUM COMPUTING INC.                                  | D                | Equity           |
| QUIK          | QuickLogic Corporation                                  | D                | Equity           |
| QURE          | uniQure N.V.  | D                | Equity           |
| QVCGA         | QVC Group, Inc.   | D                | Equity           |
| QXO           | QXO, INC.   | D                | Equity           |
| QYLD          | GLOBAL X NASDAQ 100 COVERED CALL ETF                    | D                | ETF              |
| R             | RYDER SYSTEMS INC.                                      | D                | Equity           |
| RACE          | Ferrari N.V.  | D                | Equity           |
| RAIL          | Freight Car America Inc                                 | D                | Equity           |
| RAMP          | LiveRamp Holdings, Inc.                                 | D                | Equity           |
| RANI          | RANI THERAPEUTICS HOLDINGS, INC.                        | D                | Equity           |
| RAPT          | RAPT THERAPEUTICS, INC.                                 | D                | Equity           |
| RARE          | Ultragenyx Pharmaceutical Inc.                          | D                | Equity           |
| RBA           | Ritchie Bros. Auctioneers Incorporated                  | D                | Equity           |
| RBBN          | Ribbon Communications Inc                               | D                | Equity           |
| RBLX          | Roblox Corporation                                      | D                | Equity           |
| RBRK          | Rubrik, Inc.  | D                | Equity           |
| RC            | Ready Capital Corporation                               | D                | Equity           |
| RCAT          | RED CAT HOLDINGS, INC.                                  | D                | Equity           |
| RCEL          | Avita Therapeutics, Inc.                                | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                            | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| RCI           | Rogers Communication, Inc.                     | D                | Equity           |
| RCKT          | Rocket Pharmaceuticals, Inc.                   | D                | Equity           |
| RCL           | ROYAL CARIBBEAN CRUISES LTD.                   | D                | Equity           |
| RCUS          | Arcus Biosciences, Inc.                        | D                | Equity           |
| RDDT          | Reddit, Inc.                                   | D                | Equity           |
| RDFN          | Redfin Corporation                             | D                | Equity           |
| RDI           | Reading International Inc                      | D                | Equity           |
| RDN           | RADIAN GROUP INC.                              | D                | Equity           |
| RDNT          | RadNet, Inc.                                   | D                | Equity           |
| RDUS          | Radius Recycling, Inc.                         | D                | Equity           |
| RDW           | Redwire Corporation                            | D                | Equity           |
| RDWR          | RADWARE LTD.                                   | D                | Equity           |
| RDY           | Dr. Reddy's Laboratories Limited               | D                | Equity           |
| REAL          | RealReal Inc                                   | D                | Equity           |
| REAX          | REAL BROKERAGE INC.                            | D                | Equity           |
| REE           | REE Automotive Ltd.                            | D                | Equity           |
| REFR          | Research Frontiers Inc.                        | D                | Equity           |
| REG           | REGENCY CENTERS CORP                           | D                | Equity           |
| REGN          | REGENERON PHARMACEUTICALS                      | D                | Equity           |
| REI           | Ring Energy, Inc.                              | D                | Equity           |
| REK           | ProShares Short Real Estate                    | D                | ETF              |
| REKR          | REKOR SYSTEMS, INC.                            | D                | Equity           |
| RELL          | Richardson Electronics Ltd                     | D                | Equity           |
| RELY          | REMITLY GLOBAL, INC                            | D                | Equity           |
| REM           | ISHARES MORTGAGE REAL ESTATE ETF               | D                | ETF              |
| REMX          | Market Vectors Rare Earth/Strategic Metals ETF | D                | ETF              |
| RENB          | Renovaro Biosciences Inc.                      | D                | Equity           |
| REPL          | REPLIMUNE GROUP, INC.                          | D                | Equity           |
| RES           | RPC INC  | D                | Equity           |
| RETL          | Direxion Daily Retail Bull 3X Shares           | D                | ETF              |
| REVG          | REV Group, Inc.                                | D                | Equity           |
| REX           | REX AMERICAN RESOURCES CORP                    | D                | Equity           |
| REXR          | Rexford Industrial Realty, Inc.                | D                | Equity           |
| REYN          | REYNOLDS CONSUMER PRODUCTS                     | D                | Equity           |
| REZI          | Resideo Technologies Inc                       | D                | Equity           |
| RF            | REGIONS FINANCIAL CORPORATION                  | D                | Equity           |
| RFIL          | RF Industries, Ltd.                            | D                | Equity           |
| RGA           | Reinsurance Group of America Inc               | D                | Equity           |
| RGEN          | Repligen Corporation                           | D                | Equity           |
| RGLD          | ROYAL GOLD, INC.                               | D                | Equity           |
| RGLS          | REGULUS THERAPEUTICS INC.                      | D                | Equity           |
| RGNX          | REGENXBIO Inc.                                 | D                | Equity           |
| RGP           | Resources Connection, Inc.                     | D                | Equity           |
| RGR           | STURM, RUGER & COMPANY INC.                    | D                | Equity           |
| RGTI          | Rigetti Computing, Inc                         | D                | Equity           |
| RH            | RESTORATION HARDWARE HOLDINGS, INC             | D                | Equity           |
| RHI           | ROBERT HALF INTERNATIONAL                      | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                         | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| RHP           | Ryman Hospitality Properties, Inc.(Stk Div) | D                | Equity           |
| RICK          | RCI HOSPITALITY HOLDINGS, INC.              | D                | Equity           |
| RIG           | TRANSOCEAN LTD.                             | D                | Equity           |
| RIGL          | Rigel Pharmaceuticals, Inc.                 | D                | Equity           |
| RILY          | B Riley Financial Inc                       | D                | Equity           |
| RIO           | RIO TINTO PLC                               | D                | Equity           |
| RIOT          | Riot Blockchain, Inc.                       | D                | Equity           |
| RITM          | Rithm Capital Corporation                   | D                | Equity           |
| RIVN          | Rivian Automotive, Inc.                     | D                | Equity           |
| RJF           | RAYMOND JAMES FINANCIAL INC                 | D                | Equity           |
| RKLB          | Rocket Lab Corporation                      | D                | Equity           |
| RKT           | Rocket Companies, Inc.                      | D                | Equity           |
| RL            | RALPH LAUREN CORPORATION                    | D                | Equity           |
| RLAY          | RELAY THERAPEUTICS INC                      | D                | Equity           |
| RLGT          | Radiant Logistics, Inc.                     | D                | Equity           |
| RLI           | RLI Corporation                             | D                | Equity           |
| RLMD          | RELMADA THERAPEUTICS INC                    | D                | Equity           |
| RLX           | RLX TECHNOLOGY INC                          | D                | Equity           |
| RMBL          | RUMBLEON, INC.                              | D                | Equity           |
| RMBS          | RAMBUS INC                                  | D                | Equity           |
| RMD           | RESMED, INC.                                | D                | Equity           |
| RMNI          | RIMINI STREET, INC.                         | D                | Equity           |
| RMTI          | Rockwell Medical, Inc.                      | D                | Equity           |
| RNA           | AVIDITY BIOSCIENCES INC                     | D                | Equity           |
| RNG           | RINGCENTRAL, INC.                           | D                | Equity           |
| RNR           | RENAISSANCERE HOLDINGS LTD.                 | D                | Equity           |
| RNW           | ReNew Energy Global plc                     | D                | Equity           |
| ROAD          | CONSTRUCTION PARTNERS, INC                  | D                | Equity           |
| ROBN          | T-REX 2X LONG HOOD DAILY TARGET ETF         | D                | ETF              |
| ROG           | ROGERS CORPORATION                          | D                | Equity           |
| ROIV          | ROIVANT SCIENCES LTD                        | D                | Equity           |
| ROK           | ROCKWELL AUTOMATION                         | D                | Equity           |
| ROKU          | Roku, Inc.                                  | D                | Equity           |
| ROL           | Rollins, Inc.                               | D                | Equity           |
| ROM           | ProShares Ultra Technology                  | D                | ETF              |
| ROOT          | ROOT, INC. DELAWARE                         | D                | Equity           |
| ROP           | Roper Technologies, Inc.                    | D                | Equity           |
| ROST          | ROSS STORES INC.                            | D                | Equity           |
| RPAR          | RPAR RISK PARITY                            | D                | Equity           |
| RPAY          | REPAY HOLDINGS CORP.                        | D                | Equity           |
| RPD           | Rapid7, Inc.                                | D                | Equity           |
| RPM           | RPM INTERNATIONAL, INC                      | D                | Equity           |
| RPRX          | ROYALTY PHARMA PLC                          | D                | Equity           |
| RRC           | RANGE RESOURCES CORPORATION                 | D                | Equity           |
| RRGB          | Red Robin Gourmet Burgers, Inc.             | D                | Equity           |
| RRR           | Red Rock Resorts, Inc.                      | D                | Equity           |
| RRX           | Regal Rexnord Corporation                   | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                            | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| RS            | RELIANCE STEEL & ALUMINUM CO.                  | D                | Equity           |
| RSG           | REPUBLIC SERVICES                              | D                | Equity           |
| RSI           | Rush Street Interactive, Inc.                  | D                | Equity           |
| RSKD          | RISKIFIED LTD.                                 | D                | Equity           |
| RSP           | Invesco S&P 500 Equal Weight ETF               | D                | ETF              |
| RTO           | RENTOKIL INITIAL PLC                           | D                | Equity           |
| RTX           | Raytheon Technologies Corporation              | D                | Equity           |
| RUM           | Rumble Inc.                                    | D                | Equity           |
| RUN           | Sunrun Inc.                                    | D                | Equity           |
| RVLV          | Revolve Group, Inc.                            | D                | Equity           |
| RVMD          | REVOLUTION MEDICINES, INC.                     | D                | Equity           |
| RVPH          | REVIVA PHARMACEUTICALS HOLDINGS, INC.          | D                | Equity           |
| RVTY          | Revvity, Inc.                                  | D                | Equity           |
| RWAY          | RUNWAY GROWTH FINANCE CORP.                    | D                | Equity           |
| RWM           | ProShares Short Russell2000                    | D                | ETF              |
| RWT           | REDWOOD TRUST, INC.                            | D                | Equity           |
| RXO           | RXO, INC.                                      | D                | Equity           |
| RXRX          | RECURSION PHARMACEUTICALS                      | D                | Equity           |
| RXST          | RXSIGHT, INC.                                  | D                | Equity           |
| RXT           | RACKSPACE TECHNOLOGY, INC.                     | D                | Equity           |
| RY            | ROYAL BANK OF CANADA                           | D                | Equity           |
| RYAAY         | Ryanair Holdings plc                           | D                | Equity           |
| RYAM          | RAYONIER ADVANCED MATERIALS INC.               | D                | Equity           |
| RYAN          | RYAN SPECIALITY GROUP                          | D                | Equity           |
| RYLD          | GLOBAL X FDS RUSSELL 2000                      | D                | ETF              |
| RYN           | Rayonier Inc.                                  | D                | Equity           |
| RYTM          | Rhythm Pharmaceuticals, Inc                    | D                | Equity           |
| RZLT          | REZOLUTE, INC                                  | D                | Equity           |
| RZLV          | REZOLVE AI LIMITED                             | D                | Equity           |
| S             | SENTINELONE, INC                               | D                | Equity           |
| SA            | SEABRIDGE GOLD INC                             | D                | Equity           |
| SABR          | SABRE CORPORATION                              | D                | Equity           |
| SACH          | SACHEM CAPITAL CORP.                           | D                | Equity           |
| SAFE          | Safehold Inc                                   | D                | Equity           |
| SAFT          | Safety Insurance Group Inc.                    | D                | Equity           |
| SAGE          | Sage Therapeutics, Inc.                        | D                | Equity           |
| SAH           | SONIC AUTOMOTIVE,INC.                          | D                | Equity           |
| SAIA          | Saia, Inc.                                     | D                | Equity           |
| SAIC          | Science Applications International Corporation | D                | Equity           |
| SAIL          | SailPoint, Inc.                                | D                | Equity           |
| SAM           | Boston Beer Company, Inc.                      | D                | Equity           |
| SAN           | BANCO SANTANDER, S.A.                          | D                | Equity           |
| SANA          | SANA BIOTECHNOLOGY INC.                        | D                | Equity           |
| SAND          | Sandstorm Gold Ltd.                            | D                | Equity           |
| SANM          | Sanmina Corporation                            | D                | Equity           |
| SAP           | SAP AG   | D                | Equity           |
| SARK          | TUTTLE CAPITAL SHORT INNOVATION ETF            | D                | ETF              |

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| <b>Symbol</b> | <b>Company Name</b>                                   | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| SARO          | StandardAero, Inc.                                    | D                | Equity           |
| SATL          | SATELLOGIC INC  | D                | Equity           |
| SATS          | EchoStar Corp   | D                | Equity           |
| SAVA          | Cassava Sciences Inc                                  | D                | Equity           |
| SB            | Safe Bulkers Inc.                                     | D                | Equity           |
| SBAC          | SBA COMMUNICATION CORP                                | D                | Equity           |
| SBGI          | SINCLAIR BROADCASTING GRP                             | D                | Equity           |
| SBH           | Sally Beauty Holdings Inc                             | D                | Equity           |
| SBIT          | PROSHARES ULTRASHORT BITCOIN ETF                      | D                | ETF              |
| SBLK          | Star Bulk Carriers Corporation                        | D                | Equity           |
| SBRA          | Sabra Health Care REIT, Inc.                          | D                | Equity           |
| SBS           | Companhia de Saneamento Basico do Estado de Sao Paulo | D                | Equity           |
| SBSW          | Sibanye-Stillwater                                    | D                | Equity           |
| SBUX          | STARBUCKS CORPORATION                                 | D                | Equity           |
| SCCO          | SOUTHERN COPPER CORPORATION                           | D                | Equity           |
| SCHB          | Schwab US Broad Market ETF                            | D                | ETF              |
| SCHD          | Schwab US Dividend Equity ETF                         | D                | ETF              |
| SCHG          | Schwab U.S. Large-Cap Growth ETF                      | D                | ETF              |
| SCHL          | Scholastic Corporation                                | D                | Equity           |
| SCHO          | SCHWAB SHORT-TERM US TREASURY ETF                     | D                | ETF              |
| SCHP          | Schwab U.S. TIPS ETF                                  | D                | ETF              |
| SCHW          | THE CHARLES SCHWAB CORPORATION                        | D                | Equity           |
| SCI           | SERVICE CORPORATION INTERNATIONAL                     | D                | Equity           |
| SCM           | Stellus Capital Investment Corp                       | D                | Equity           |
| SCO           | ProShare UltraShort DJ UBS Crude Oil                  | D                | ETF              |
| SCPH          | SCPHARMACEUTICALS, INC.                               | D                | Equity           |
| SCS           | STEELCASE, INC. CLASS A                               | D                | Equity           |
| SCSC          | SCANSOURCE, INC.                                      | D                | Equity           |
| SCVL          | Shoe Carnival Inc                                     | D                | Equity           |
| SCYX          | SCYNEXIS, Inc.  | D                | Equity           |
| SD            | SandRidge Energy, Inc.                                | D                | Equity           |
| SDGR          | SCHRODINGER, INC.                                     | D                | Equity           |
| SDIV          | Global X SuperDividend ETF                            | D                | Equity           |
| SDOW          | ProShares UltraPro Short Dow30                        | D                | ETF              |
| SDRL          | SEADRILL LIMITED                                      | D                | Equity           |
| SDS           | PROSHARES ULTRASHORT S&P500                           | D                | ETF              |
| SDY           | SPDR S&P Dividend ETF                                 | D                | ETF              |
| SE            | Sea Limited   | D                | Equity           |
| SEAT          | VIVID SEATS INC                                       | D                | Equity           |
| SEDG          | SolarEdge Technologies, Inc.                          | D                | Equity           |
| SEE           | SEALED AIR CORP                                       | D                | Equity           |
| SEI           | Solaris Energy Infrastructure, Inc.                   | D                | Equity           |
| SEIC          | SEI INVESTMENTS CO                                    | D                | Equity           |
| SEM           | Select Medical Holdings Corporation                   | D                | Equity           |
| SEMR          | SEMRUSH HOLDINGS, INC.                                | D                | Equity           |
| SENS          | Senseonics Holdings Inc.                              | D                | Equity           |
| SERV          | SERVE ROBOTICS INC.                                   | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                          | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| SES           | SES AI Corporation                           | D                | Equity           |
| SEZL          | SEZZLE INC                                   | D                | Equity           |
| SF            | Stifel Financial Corp.                       | D                | Equity           |
| SFIX          | Stitch Fix, Inc.                             | D                | Equity           |
| SFL           | SHIP FINANCE INTERNATIONAL LIMITED           | D                | Equity           |
| SFM           | SPROUTS FARMERS MARKET, INC.                 | D                | Equity           |
| SG            | SWEETGREEN, INC.                             | D                | Equity           |
| SGHC          | Super Group                                  | D                | Equity           |
| SGHT          | SIGHT SCIENCES, INC.                         | D                | Equity           |
| SGI           | Somnigroup International Inc.                | D                | Equity           |
| SGML          | SIGMA LITHIUM CORP                           | D                | Equity           |
| SGMO          | Sangamo Therapeutics, Inc.                   | D                | Equity           |
| SGMT          | SAGIMET BIOSCIENCES INC.                     | D                | Equity           |
| SGOL          | ETFS Physical Swiss Gold Shares ETF          | D                | ETF              |
| SGRY          | Surgery Partners Inc.                        | D                | Equity           |
| SH            | ProShares Short S&P 500                      | D                | ETF              |
| SHAK          | Shake Shack Inc.                             | D                | Equity           |
| SHC           | SOTERA HEALTH COMPANY                        | D                | Equity           |
| SHCO          | Soho House & Co Inc.                         | D                | Equity           |
| SHEL          | Shell plc                                    | D                | Equity           |
| SHIP          | SEANERGY MARITIME HOLDINGS CORP              | D                | Equity           |
| SHLD          | GLOBAL X DEFENSE TECH ETF                    | D                | ETF              |
| SHLS          | SHOALS TECHNOLOGIES GROUP                    | D                | Equity           |
| SHO           | Sunstone Hotel Investors, Inc.               | D                | Equity           |
| SHOO          | STEVEN MADDEN, LTD.                          | D                | Equity           |
| SHOP          | Shopify Inc.                                 | D                | Equity           |
| SHOT          | SAFETY SHOT, INC.                            | D                | Equity           |
| SHW           | THE SHERWIN-WILLIAMS COMPANY                 | D                | Equity           |
| SHY           | Ishares Barclays 1-3 Year Treasury Bond      | D                | ETF              |
| SIBN          | SI-BONE, INC.                                | D                | Equity           |
| SID           | COMPANHIA SIDERURGICAL NACIONAL ADR          | D                | Equity           |
| SIEB          | Siebert Financial Corp                       | D                | Equity           |
| SIG           | SIGNET JEWELERS LIMITEDSHS                   | D                | Equity           |
| SIGA          | SIGA Technologies Inc.                       | D                | Equity           |
| SII           | Sprott Inc                                   | D                | Equity           |
| SIL           | Global X Silver Miners ETF                   | D                | ETF              |
| SILJ          | ETFMG Prime Junior Silver ETF                | D                | ETF              |
| SIMO          | Silicon Motion Technology Corp.              | D                | Equity           |
| SIRI          | SIRIUS XM RADIO INC.                         | D                | Equity           |
| SITC          | SITE Centers Corporation                     | D                | Equity           |
| SITM          | SITIME CORP                                  | D                | Equity           |
| SIVR          | ETFS Physical Silver                         | D                | ETF              |
| SJM           | J M SMUCKER COMPANY (THE)                    | D                | Equity           |
| SJNK          | SPDR Barclays Short Term High Yield Bond ETF | D                | ETF              |
| SJT           | San Juan Basin Royalty Trust                 | D                | Equity           |
| SKE           | SKEENA RESOURCES LIMITED                     | D                | Equity           |
| SKF           | ProShares UltraShort Financials              | D                | ETF              |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                                | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| SKIN          | The Beauty Health Company                          | D                | Equity           |
| SKLZ          | Skillz Inc.  | D                | Equity           |
| SKT           | Tanger Factory Outlet Centers, Inc.                | D                | Equity           |
| SKX           | SKETCHERS USA INCORPORATED                         | D                | Equity           |
| SKY           | Skyline Champion Corporation                       | D                | Equity           |
| SKYT          | SKYWATER TECHNOLOGY INC                            | D                | Equity           |
| SKYW          | SkyWest Inc.                                       | D                | Equity           |
| SKYY          | First Trust ISE Cloud Computing Index Fund         | D                | ETF              |
| SLAB          | SILICON LABORATORIES INC.                          | D                | Equity           |
| SLB           | SCHLUMBERGER LIMITED                               | D                | Equity           |
| SLDB          | SOLID BIOSCIENCES, INC                             | D                | Equity           |
| SLDP          | Solid Power, Inc.                                  | D                | Equity           |
| SLF           | SUN LIFE FINANCIAL INC.                            | D                | Equity           |
| SLG           | SL Green Realty Corp.                              | D                | Equity           |
| SLGN          | Silgan Holdings Inc.                               | D                | Equity           |
| SLI           | STANDARD LITHIUM LTD.                              | D                | Equity           |
| SLM           | SLM CORP   | D                | Equity           |
| SLNO          | SOLENO THERAPEUTICS INC                            | D                | Equity           |
| SLP           | Simulations Plus, Inc                              | D                | Equity           |
| SLQT          | SELECTQUOTE, INC.                                  | D                | Equity           |
| SLS           | SELLAS LIFE SCIENCES GROUP, INC.                   | D                | Equity           |
| SLV           | ISHARES SILVER TRUST                               | D                | ETF              |
| SLVM          | SYLVAMO CORPORATION                                | D                | Equity           |
| SM            | SM Energy Company                                  | D                | Equity           |
| SMCI          | SUPER MICRO COMPUTER INC                           | D                | Equity           |
| SMCX          | Defiance Daily Target 2X Long SMCI ETF             | D                | ETF              |
| SMCY          | YIELDMAX SMCI OPTION INCOME STRATEGY ETF           | D                | ETF              |
| SMFG          | SUMITOMO MITSUI FINANCIAL GROUP, INC.              | D                | Equity           |
| SMG           | The Scotts Miracle-Gro Company                     | D                | Equity           |
| SMH           | MARKET VECTORS SEMICONDUCTOR ETF                   | D                | ETF              |
| SMHI          | SEACOR MARINE HOLDINGS INC                         | D                | Equity           |
| SMLR          | SEMLER SCIENTIFIC, INC.                            | D                | Equity           |
| SMMT          | Summit Therapeutics Inc.                           | D                | Equity           |
| SMPL          | Simply Good Foods Co                               | D                | Equity           |
| SMR           | NuScale Power Corporation                          | D                | Equity           |
| SMRT          | SmartRent, Inc.                                    | D                | Equity           |
| SMSI          | Smith Micro Software, Inc.                         | D                | Equity           |
| SMST          | Tidal Trust II Defiance Daily Target 2x Short MSTR | D                | ETF              |
| SMTC          | SEMTECH CORPORATION                                | D                | Equity           |
| SMWB          | SIMILARWEB LTD.SIMILARWEB LTD.                     | D                | Equity           |
| SN            | SHARKNINJA INC                                     | D                | Equity           |
| SNA           | SNAP-ON INCORPORATED                               | D                | Equity           |
| SNAP          | Snap, Inc  | D                | Equity           |
| SNBR          | Sleep Number Corporation                           | D                | Equity           |
| SNCR          | Synchronoss Technologies, Inc.                     | D                | Equity           |
| SNCY          | SUN COUNTRY AIRLINES HOLDINGS, INC.                | D                | Equity           |
| SND           | Smart Sand, Inc.                                   | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                              | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| SNDK          | SANDISK CORPORATION                              | D                | Equity           |
| SNDL          | SNDL Inc   | D                | Equity           |
| SNDR          | Schneider National, Inc                          | D                | Equity           |
| SNDX          | Syndax Pharmaceuticals, Inc                      | D                | Equity           |
| SNOW          | Snowflake Inc.                                   | D                | Equity           |
| SNPS          | Synopsys Inc.                                    | D                | Equity           |
| SNV           | SYNOVUS FINANCIAL CORPORATION                    | D                | Equity           |
| SNX           | Synnex Corporation                               | D                | Equity           |
| SNY           | Sanofi   | D                | Equity           |
| SO            | SOUTHERN COMPANY                                 | D                | Equity           |
| SOBO          | South Bow Corporation                            | D                | Equity           |
| SOC           | SABLE OFFSHORE CORP.                             | D                | Equity           |
| SOFI          | SoFi Technologies, Inc.                          | D                | Equity           |
| SOHU          | SOHU.COM INC.                                    | D                | Equity           |
| SOL           | ReneSola Ltd (ADS)                               | D                | Equity           |
| SOLV          | SOLVENTUM CORPORATION                            | D                | Equity           |
| SON           | Sonoco Products Co.                              | D                | Equity           |
| SOND          | SONDER HOLDINGS INC.                             | D                | Equity           |
| SONO          | Sonos, Inc.                                      | D                | Equity           |
| SONY          | Sony Group Corporation                           | D                | Equity           |
| SOUN          | SOUNDHOUND AI, INC                               | D                | Equity           |
| SOXL          | DIREXION DAILY SEMICONDUCTOR BULL 3X ETF         | D                | ETF              |
| SOXS          | Direxion Daily Semiconductor Bear 3X ETF         | D                | ETF              |
| SOXX          | iShares PHLX Semiconductor Index Fund            | D                | ETF              |
| SOYB          | Teucrium Soybean ETF                             | D                | ETF              |
| SPB           | Spectrum Brands Holdings Inc.                    | D                | Equity           |
| SPCE          | Virgin Galactic Holdings, Inc.                   | D                | Equity           |
| SPG           | SIMON PROPERTY GROUP INC.                        | D                | Equity           |
| SPGI          | S&P Global Inc.                                  | D                | Equity           |
| SPH           | Suburban Propane Partners, L.P.                  | D                | Equity           |
| SPHB          | Invesco S&P 500 High Beta ETF                    | D                | ETF              |
| SPHD          | Invesco S&P 500 High Dividend Low Volatility ETF | D                | ETF              |
| SPHR          | Sphere Entertainment Co.                         | D                | Equity           |
| SPIR          | Spire Global, Inc.                               | D                | Equity           |
| SPLG          | SPDR Portfolio S&P 500 ETF                       | D                | ETF              |
| SPLV          | PowerShares S&P 500 Low Volatility ETF           | D                | ETF              |
| SPOT          | Spotify Technology S.A.                          | D                | Equity           |
| SPR           | Spirit Aerosystems Holdings Inc                  | D                | Equity           |
| SPRO          | Spero Therapeutics Inc                           | D                | Equity           |
| SPRU          | Spruce Power Holding Corporation                 | D                | Equity           |
| SPRY          | ARS Pharmaceuticals, Inc.                        | D                | Equity           |
| SPSC          | SPS Commerce, Inc.                               | D                | Equity           |
| SPSM          | SPDR Portfolio S&P 600 Small Cap ETF             | D                | ETF              |
| SPT           | SPROUT SOCIAL INC                                | D                | Equity           |
| SPTL          | SPDR PORTFOLIO LONG TERM TREASURY ETF            | D                | ETF              |
| SPTN          | Spartan Stores, Inc.                             | D                | Equity           |
| SPWH          | Sportsman's Warehouse Holdings, Inc.             | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                                 | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| SPXC          | SPX Corporation                                     | D                | Equity           |
| SPXL          | Direxion Daily S&P 500 Bull 3X Shares               | D                | ETF              |
| SPXS          | Direxion Daily S&P 500 Bear 3X Shares (1:5 reverse) | D                | ETF              |
| SPXU          | PROSHARES ULTRAPRO SHORT S&P500                     | D                | ETF              |
| SPY           | SPDR S&P 500 TRUST                                  | D                | ETF              |
| SPYD          | SPDR PORTFOLIO S&P 500 HIGH DIVIDEND                | D                | ETF              |
| SPYG          | SPDR PORTFOLIO S&P 500 GROWTH ETF                   | D                | ETF              |
| SPYI          | NEOS S&P 500 HIGH INCOME ETF                        | D                | ETF              |
| SPYV          | SPDR PORTFOLIO S&P 500 VALUE ETF                    | D                | ETF              |
| SQM           | CHEMICAL & MINING CO. OF CHILE INC.                 | D                | Equity           |
| SQQQ          | PROSHARES ULTRAPRO SHORT QQQ                        | D                | ETF              |
| SQQQ          | PROSHARES ULTRAPRO SHORT QQQ                        | D                | ETF              |
| SRAD          | SPORTRADAR GROUP                                    | D                | Equity           |
| SRDX          | Surmodics, Inc.                                     | D                | Equity           |
| SRE           | SEMPRA ENERGY                                       | D                | Equity           |
| SRG           | Seritage Growth Properties                          | D                | Equity           |
| SRI           | Stoneridge, Inc.                                    | D                | Equity           |
| SRLN          | SPDR Blackstone Senior Loan ETF                     | D                | ETF              |
| SRPT          | SAREPTA THERAPEUTICS, INC.                          | D                | Equity           |
| SRRK          | SCHOLAR ROCK HOLDING CORP.                          | D                | Equity           |
| SRS           | ProShares UltraShort Real Estate                    | D                | ETF              |
| SRTS          | SENSUS HEALTHCARE, INC                              | D                | Equity           |
| SRTY          | ProShares UltraPro Short Russell2000                | D                | ETF              |
| SSB           | South State Corporation                             | D                | Equity           |
| SSD           | Simpson Manufacturing Co., Inc.                     | D                | Equity           |
| SSL           | SASOL LTD   | D                | Equity           |
| SSNC          | SS&C Technologies Holdings, Inc.                    | D                | Equity           |
| SSO           | PROSHARES ULTRA S&P500                              | D                | ETF              |
| SSP           | The E.W. Scripps Company                            | D                | Equity           |
| SSRM          | SSR Mining Inc.                                     | D                | Equity           |
| SSSS          | Sutter Rock Capital Corporation                     | D                | Equity           |
| SST           | System1, Inc  | D                | Equity           |
| SSTI          | SoundThinking, Inc.                                 | D                | Equity           |
| SSTK          | SHUTTERSTOCK, INC.                                  | D                | Equity           |
| SSYS          | STRATASYS INC.                                      | D                | Equity           |
| ST            | Sensata Technologies Holding                        | D                | Equity           |
| STAA          | STAAR SURGICAL COMPANY                              | D                | Equity           |
| STAG          | STAG Industrial, Inc.                               | D                | Equity           |
| STE           | STERIS Corp.  | D                | Equity           |
| STEM          | Stem, Inc.  | D                | Equity           |
| STEP          | STEPSTONE GROUP INC                                 | D                | Equity           |
| STGW          | Stagwell Inc.                                       | D                | Equity           |
| STIM          | NEURONETICS, INC.                                   | D                | Equity           |
| STKL          | SunOpta Inc.  | D                | Equity           |
| STKS          | ONE GROUP HOSPITALITY, INC.                         | D                | Equity           |
| STLA          | Stellantis N.V.                                     | D                | Equity           |
| STLD          | STEEL DYNAMICS INC                                  | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                       | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| STM           | STMicroelectronics NV                     | D                | Equity           |
| STNE          | StoneCo Ltd.                              | D                | Equity           |
| STNG          | SCORPIO TANKERS, INC.                     | D                | Equity           |
| STOK          | STOKE THERAPEUTICS, INC.                  | D                | Equity           |
| STR           | Sitio Royalties Corporation               | D                | Equity           |
| STRA          | STRAYER EDUCATION, INC.                   | D                | Equity           |
| STRL          | Sterling Construction Company Inc.        | D                | Equity           |
| STRO          | SUTRO BIOPHARMA, INC.                     | D                | Equity           |
| STT           | STATE STREET CORPORATION                  | D                | Equity           |
| STWD          | Starwood Property Trust, Inc.             | D                | Equity           |
| STX           | SEAGATE TECHNOLOGY PUBLIC LIMITED COMPANY | D                | Equity           |
| STXS          | STEREOTAXIS, INC.                         | D                | Equity           |
| STZ           | CONSTELLATION BRANDS INC.                 | D                | Equity           |
| SU            | SUNCOR ENERGY INC.                        | D                | Equity           |
| SUI           | Sun Communities, Inc.                     | D                | Equity           |
| SUN           | SUNOCO L.P.                               | D                | Equity           |
| SUP           | SUPERIOR INDUSTRIES INT                   | D                | Equity           |
| SUPN          | SUPERNUS PHARMACEUTICALS, INC.            | D                | Equity           |
| SUPV          | GRUPO SUPERVIELLE SA                      | D                | Equity           |
| SURG          | SURGEPAYS INC                             | D                | Equity           |
| SVC           | Service Properties Trust                  | D                | Equity           |
| SVIX          | -1X SHORT VIX FUTURES ETF                 | D                | ETF              |
| SVM           | SILVERCORP METALS INC                     | D                | Equity           |
| SVOL          | SIMPLITY ETF VOL PREM                     | D                | ETF              |
| SVRA          | Savara Inc.                               | D                | Equity           |
| SVV           | SAVERS VALUE VILLAGE, INC                 | D                | Equity           |
| SVXY          | ProShares Short VIX Short-Term Futures    | D                | ETF              |
| SW            | Smurfit Westrock Plc                      | D                | Equity           |
| SWBI          | Smith & Wesson Brands, Inc. (SWBI)        | D                | Equity           |
| SWIM          | LATHAM GROUP INC                          | D                | Equity           |
| SWK           | Stanley Black & Decker                    | D                | Equity           |
| SWKS          | SKYWORKS SOLUTIONS INC.                   | D                | Equity           |
| SWTX          | SPRINGWORKS THERAPEUTICS INC              | D                | Equity           |
| SXC           | SunCoke Energy, Inc.                      | D                | Equity           |
| SY            | SO-YOUNG INTERNATIONAL, INC.              | D                | Equity           |
| SYF           | SYNCHRONY FINANCIAL                       | D                | Equity           |
| SYK           | STRYKER CORP                              | D                | Equity           |
| SYM           | SYMBOTIC INC                              | D                | Equity           |
| SYNA          | SYNAPTICS, INC.                           | D                | Equity           |
| SYPR          | SYPRIS SOLUTIONS, INC.                    | D                | Equity           |
| SYRE          | SPYRE THERAPEUTICS, INC.                  | D                | Equity           |
| SYU           | SYSCO CORPORATION                         | D                | Equity           |
| T             | AT&T, INC.                                | D                | Equity           |
| TAC           | TRANSALTA CORP                            | D                | Equity           |
| TAIL          | CAMBRIA TAIL RISK ETF                     | D                | ETF              |
| TAK           | Takeda Pharmaceutical Company Limited     | D                | Equity           |
| TAL           | TAL International Group Inc               | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                    | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| TALK          | Talkspace, Inc.                        | D                | Equity           |
| TALO          | Talos Energy Inc.                      | D                | Equity           |
| TAN           | Guggenheim Solar ETF                   | D                | ETF              |
| TAP           | Molson Coors Brewing Co.               | D                | Equity           |
| TARA          | PROTARA THERAPEUTICS, INC.             | D                | Equity           |
| TARK          | AXS 2X INNOVATION ETF                  | D                | ETF              |
| TARS          | TARSUS PHARMACEUTICALS, INC.           | D                | Equity           |
| TASK          | TASKUS, INC.                           | D                | Equity           |
| TBBK          | Bancorp Inc/DE                         | D                | Equity           |
| TBCH          | Turtle Beach Corporation               | D                | Equity           |
| TBF           | ProShares Short 20+ Year Treasury      | D                | ETF              |
| TBI           | TrueBlue, Inc.                         | D                | Equity           |
| TBLA          | Taboola.com Ltd.                       | D                | Equity           |
| TBPH          | Theravance Biopharma, Inc.             | D                | Equity           |
| TBT           | PROSHARES ULTRASHORT 20+ YEAR TREASURY | D                | ETF              |
| TCBI          | Texas Capital Bancshares, Inc.         | D                | Equity           |
| TCMD          | Tactile Systems Technology I           | D                | Equity           |
| TCOM          | Trip.com Group Limited                 | D                | Equity           |
| TCPC          | BlackRock TCP Capital Corp.            | D                | Equity           |
| TCX           | TUCOWS, INC                            | D                | Equity           |
| TD            | TORONTO DOMINION BANK                  | D                | Equity           |
| TDC           | Teradata Corp.                         | D                | Equity           |
| TDG           | TransDigm Group, Inc.                  | D                | Equity           |
| TDOC          | Teladoc, Inc.                          | D                | Equity           |
| TDS           | TELEPHONE & DATA SYSTEMS INC.          | D                | Equity           |
| TDUP          | THREDUP INC                            | D                | Equity           |
| TDW           | TIDEWATER INC.                         | D                | Equity           |
| TDY           | Teledyne Technologies Inc              | D                | Equity           |
| TE            | T1 Energy Inc.                         | D                | Equity           |
| TEAM          | Atlassian Corporation Plc              | D                | Equity           |
| TECH          | Bio-Techne Corporation                 | D                | Equity           |
| TECK          | Teck Resources Limited                 | D                | Equity           |
| TECL          | Direxion Daily Technology Bull 3X ETF  | D                | ETF              |
| TECS          | Direxion Daily Technology Bear 3X ETF  | D                | ETF              |
| TEF           | TELEFONICA S.A.                        | D                | Equity           |
| TEL           | TE Connectivity Ltd.                   | D                | Equity           |
| TEM           | Tempus AI, Inc                         | D                | Equity           |
| TEN           | Tsakos Energy Navigation Limited       | D                | Equity           |
| TENB          | TENABLE HOLDINGS INC                   | D                | Equity           |
| TER           | TERADYNE, INC                          | D                | Equity           |
| TERN          | TERNS PHARMACEUTICALS, INC.            | D                | Equity           |
| TEVA          | TEVA PHARMACEUTICAL INDUSTRIES LIMITED | D                | Equity           |
| TEX           | TEREX CORPORATION                      | D                | Equity           |
| TFC           | Truist Financial Corporation           | D                | Equity           |
| TFII          | TFI INTERNATIONAL INC.                 | D                | Equity           |
| TFIN          | Triumph Financial Inc                  | D                | Equity           |
| TFPM          | TRIPLE FLAG PRECIOUS METALS CORP       | D                | Equity           |

| Emerald Securities List as of 6/2/2025 |  |           |           |
|--|--|-----------|-----------|
| Symbol                                 | Company Name                                   | List Exch | Inst Type |
| TFSL                                   | TFS Financial Corporation                      | D         | Equity    |
| TFX                                    | Teleflex Incorporated                          | D         | Equity    |
| TG                                     | Tredegar Corp                                  | D         | Equity    |
| TGB                                    | Taseko Mines Limited                           | D         | Equity    |
| TGI                                    | Triumph Group, Inc.                            | D         | Equity    |
| TGLS                                   | TECNOGLASS INC.                                | D         | Equity    |
| TGNA                                   | TEGNA, Inc.                                    | D         | Equity    |
| TGT                                    | TARGET CORPORATION                             | D         | Equity    |
| TGTX                                   | TG THERAPEUTICS, INC.                          | D         | Equity    |
| TH                                     | TARGET HOSPITALITY CORP.                       | D         | Equity    |
| THC                                    | TENET HEALTHCARE CORP (25 shrs)                | D         | Equity    |
| THO                                    | THOR INDUSTRIES INC                            | D         | Equity    |
| THRY                                   | THRYV HOLDINGS, INC.                           | D         | Equity    |
| THS                                    | Treehouse Foods, Inc.                          | D         | Equity    |
| THTX                                   | THERATECHNOLOGIES INC.                         | D         | Equity    |
| TIGR                                   | UP FINTECH HOLDINGS LIMITED                    | D         | Equity    |
| TIMB                                   | TIM S.A.                                       | D         | Equity    |
| TIP                                    | iShares Barclays TIPS Bond Fund                | D         | ETF       |
| TIPT                                   | TIPTREE INC.                                   | D         | Equity    |
| TITN                                   | Titan Machinery, Inc.                          | D         | Equity    |
| TIXT                                   | TELUS INTERNATIONAL CDA, INC.                  | D         | Equity    |
| TJX                                    | THE TJX COMPANIES, INC.                        | D         | Equity    |
| TK                                     | Teekay Corp                                    | D         | Equity    |
| TKO                                    | TKO Group Holdings, Inc.                       | D         | Equity    |
| TKR                                    | TIMKEN COMPANY                                 | D         | Equity    |
| TLH                                    | iShares 10-20 Year Treasury Bond ETF           | D         | ETF       |
| TLN                                    | TALEN ENERGY CORP                              | D         | Equity    |
| TLPH                                   | Talpheria, Inc.                                | D         | Equity    |
| TLRY                                   | Tilray, Inc.                                   | D         | Equity    |
| TLS                                    | TELOS CORPORATION                              | D         | Equity    |
| TLSA                                   | TIZIANA LIFE SCIENCES PLC                      | D         | Equity    |
| TLT                                    | ISHARES 20+ YEAR TREASURY BOND ETF             | D         | ETF       |
| TLYS                                   | Tilly's Inc.                                   | D         | Equity    |
| TM                                     | TOYOTA MOTOR CORP                              | D         | Equity    |
| TMC                                    | TMC the metals company Inc.                    | D         | Equity    |
| TMCI                                   | TREACE MEDICAL CONCEPTS, INC.                  | D         | Equity    |
| TMDX                                   | TRANSMEDICS GROUP, INC.                        | D         | Equity    |
| TME                                    | Tencent Music Entertainment Group              | D         | Equity    |
| TMF                                    | DIREXION DAILY 20+ YR TRSY BULL 3X ETF         | D         | ETF       |
| TMHC                                   | Taylor Morrison Home Corp                      | D         | Equity    |
| TMO                                    | Thermo Fisher Scientific Inc.                  | D         | Equity    |
| TMQ                                    | Trilogy Metals Inc.                            | D         | Equity    |
| TMUS                                   | T-MOBILE US, INC.                              | D         | Equity    |
| TMV                                    | Direxion Daily 20 Year Treasury Bear 3X Shares | D         | ETF       |
| TNA                                    | DIREXION DAILY SMALL CAP BULL 3X SHARES        | D         | ETF       |
| TNDM                                   | Tandem Diabetes Care, Inc.                     | D         | Equity    |
| TNET                                   | TRINET GROUP, INC.                             | D         | Equity    |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                  | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--------------------------------------|------------------|------------------|
| TNK           | Teekay Tankers Ltd                   | D                | Equity           |
| TNL           | Travel + Leisure Co.                 | D                | Equity           |
| TNYA          | TENAYA THERAPEUTICS, INC.            | D                | Equity           |
| TOKE          | CAMBRIA CANNABIS ETF                 | D                | ETF              |
| TOL           | TOLL BROTHERS INC.                   | D                | Equity           |
| TOON          | Kartoon Studios, Inc.                | D                | Equity           |
| TOST          | TOAST, INC                           | D                | Equity           |
| TOUR          | TUNIU CORPORATION                    | D                | Equity           |
| TPB           | Turning Piont Brands Inc             | D                | Equity           |
| TPC           | Tutor Perini Corporation             | D                | Equity           |
| TPG           | TPG INC                              | D                | Equity           |
| TPH           | TRI POINTE HOMES, INC.               | D                | Equity           |
| TPIC          | TPI Composites Inc                   | D                | Equity           |
| TPL           | TEXAS PACIFIC LAND CORP              | D                | Equity           |
| TPR           | Tapestry, Inc.                       | D                | Equity           |
| TPVG          | TriplePoint Venture Growth BDC Corp. | D                | Equity           |
| TQQQ          | ProShares Ultra Pro QQQ              | D                | ETF              |
| TR            | Tootsie Roll Industries Inc          | D                | Equity           |
| TRAK          | ReposiTrak                           | D                | Equity           |
| TREE          | LendingTree, Inc.                    | D                | Equity           |
| TREX          | Trex Co. Inc.                        | D                | Equity           |
| TRGP          | Targa Resources Corp.                | D                | Equity           |
| TRI           | Thomson Reuters Corporation          | D                | Equity           |
| TRIN          | TRINITY CAPITAL, INC.                | D                | Equity           |
| TRIP          | TRIPADVISOR INC.                     | D                | Equity           |
| TRMB          | TRIMBLE NAVIGATION LIMITED           | D                | Equity           |
| TRMD          | TORM PLC                             | D                | Equity           |
| TRML          | TOURMALINE BIO, INC.                 | D                | Equity           |
| TRN           | TRINITY INDUSTRIES INC.              | D                | Equity           |
| TROW          | T. ROWE PRICE GROUP INC.             | D                | Equity           |
| TROX          | Tronox Ltd.                          | D                | Equity           |
| TRP           | TransCanada Corp.                    | D                | Equity           |
| TRTX          | TPG RE Finance Trust, Inc.           | D                | Equity           |
| TRU           | TransUnion                           | D                | Equity           |
| TRUE          | TRUECAR, INC.                        | D                | Equity           |
| TRUP          | Trupanion, Inc.                      | D                | Equity           |
| TRV           | THE TRAVELERS COMPANIES, INC.        | D                | Equity           |
| TRVG          | trivago N.V.                         | D                | Equity           |
| TRVI          | TREVI THERAPEUTICS, INC.             | D                | Equity           |
| TRX           | Tanzanian Royalty Exploration        | D                | Equity           |
| TS            | TENARIS SA                           | D                | Equity           |
| TSAT          | Telesat Corporation                  | D                | Equity           |
| TSCO          | TRACTOR SUPPLY COMPANY               | D                | Equity           |
| TSE           | Trinseo S.A.                         | D                | Equity           |
| TSEM          | TOWER SEMICONDUCTOR LTD.             | D                | Equity           |
| TSHA          | TAYSHA GENE THERAPIES, INC.          | D                | Equity           |
| TSLA          | TESLA MOTORS, INC.                   | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                               | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| TSLL          | DIREXION DAILY TSLA BULL 1.5X SHARES              | D                | ETF              |
| TSLQ          | AXS TSLA BEAR DAILY ETF                           | D                | ETF              |
| TSLR          | GraniteShares 2x Long TSLA Daily ETF              | D                | ETF              |
| TSLS          | DIREXDIREXION DAILY TSLA BEAR 1X SHARES           | D                | ETF              |
| TSLT          | T-Rex 2X Long Tesla Daily Target ETF              | D                | ETF              |
| TSLX          | Sixth Street Specialty Lending, Inc.              | D                | Equity           |
| TSLY          | YIELDMAX TSLA OPTION INCOME STRATEGY ETF          | D                | ETF              |
| TSLZ          | ETF OPPORTUNITIES TRUSTT-REX 2X INVERSE           | D                | ETF              |
| TSM           | TAIWAN SEMICONDUCTOR MFG. CO.                     | D                | Equity           |
| TSN           | TYSON FOODS, INC.                                 | D                | Equity           |
| TSQ           | Townsquare Media, Inc.                            | D                | Equity           |
| TSSI          | TSS INC   | D                | Equity           |
| TT            | Trane Technologies plc                            | D                | Equity           |
| TTAN          | ServiceTitan, Inc.                                | D                | Equity           |
| TTC           | THE TORO COMPANY                                  | D                | Equity           |
| TTD           | The Trade Desk, Inc.                              | D                | Equity           |
| TTE           | TotalEnergies SE                                  | D                | Equity           |
| TTEC          | TTEC Holdings, Inc.                               | D                | Equity           |
| TTEK          | Tetra Tech, Inc.                                  | D                | Equity           |
| TTI           | TETRA Technologies, Inc.                          | D                | Equity           |
| TTMI          | TTM Technologies, Inc.                            | D                | Equity           |
| TTT           | ProShares UltraPro Short 20+ Year Treasury        | D                | ETF              |
| TTWO          | TAKE-TWO INTERACTIVE                              | D                | Equity           |
| TU            | Telus Corporation                                 | D                | Equity           |
| TUA           | SIMPLIFY SHORT TERM TREASURY FUTURES STRATEGY ETF | D                | ETF              |
| TUR           | ISHARES MSCI TURKEY                               | D                | ETF              |
| TURN          | 180 Degree Capital Corporation                    | D                | Equity           |
| TUSK          | Mammoth Energy Services Inc                       | D                | Equity           |
| TUYA          | TUYA INC  | D                | Equity           |
| TV            | GRUPO TELEVISA, S.A.B.                            | D                | Equity           |
| TVTX          | Traverse Therapeutics, Inc                        | D                | Equity           |
| TW            | Tradeweb Markets Inc.                             | D                | Equity           |
| TWI           | Titan International, Inc.                         | D                | Equity           |
| TWLO          | Twilio, Inc.                                      | D                | Equity           |
| TWM           | Proshares UltrShort Russell 2000(reverse split)   | D                | Equity           |
| TWO           | Two Harbors Investment Corporation                | D                | Equity           |
| TWST          | TWIST BIOSCIENCE CORP.                            | D                | Equity           |
| TX            | Ternium S.A.                                      | D                | Equity           |
| TXG           | 10X Genomics Inc                                  | D                | Equity           |
| TXMD          | THERAPEUTICSMD, INC                               | D                | Equity           |
| TXN           | TEXAS INSTRUMENTS INC.                            | D                | Equity           |
| TXNM          | TXNM Energy, Inc.                                 | D                | Equity           |
| TXRH          | Texas Roadhouse, Inc.                             | D                | Equity           |
| TXT           | TEXTRON INC.                                      | D                | Equity           |
| TYD           | Direxion Daily 7 to 10 Year Treasury Bull 3X Shrs | D                | ETF              |
| TYL           | Tyler Technologies, Inc.                          | D                | Equity           |
| TZA           | DIREXION DAILY SMALL CAP BEAR 3X SHARES           | D                | ETF              |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                         | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| U             | UNITY SOFTWARE, INC.                        | D                | Equity           |
| UA            | UNDER ARMOUR, INC.                          | D                | Equity           |
| UAA           | Under Armour, Inc.                          | D                | Equity           |
| UAL           | UNITED CONTINENTAL HOLDINGS, INC.           | D                | Equity           |
| UAMY          | US Antimony Corp.                           | D                | Equity           |
| UAN           | CVR Partners LP                             | D                | Equity           |
| UBER          | Uber Technologies, Inc.                     | D                | Equity           |
| UBRL          | GRANITESHARES 2X LONG UBER DAILY ETF        | D                | ETF              |
| UBS           | UBS Group Ag                                | D                | Equity           |
| UBX           | UNITY BIOTECHNOLOGY INC.                    | D                | Equity           |
| UCO           | PROSHARES ULTRA DJ-UBS CRUDE OIL            | D                | ETF              |
| UCTT          | Ultra Clean Holdings, Inc.                  | D                | Equity           |
| UDMY          | UDEM, INC.                                  | D                | Equity           |
| UDN           | PowerShares DB US Dollar Index Bearish Fund | D                | ETF              |
| UDOW          | ProShares UltraPro Dow30                    | D                | ETF              |
| UDR           | UDR, Inc.                                   | D                | Equity           |
| UEC           | Uranium Energy Corp                         | D                | Equity           |
| UGA           | United States Gasoline                      | D                | ETF              |
| UGI           | UGI Corporation                             | D                | Equity           |
| UGL           | ProShares Ultra Gold                        | D                | ETF              |
| UGP           | Ultrapar Participacoes SA                   | D                | Equity           |
| UHS           | UNIVERSAL HEALTH SERVICES INC               | D                | Equity           |
| UIS           | UNISYS CORPORATION                          | D                | Equity           |
| UL            | Unilever PLC                                | D                | Equity           |
| ULCC          | Frontier Group Holdings, Inc.               | D                | Equity           |
| ULE           | ProShares Ultra Euro                        | D                | ETF              |
| ULS           | UL Solutions Inc.                           | D                | Equity           |
| ULTA          | ULTA SALON COSMETICS & FRAGRANCE INC        | D                | Equity           |
| ULTY          | YIELDMAX ULTRA OPTION INCOME STRATEGY ETF   | D                | ETF              |
| UMAC          | UNUSUAL MACHINES INC                        | D                | Equity           |
| UMC           | United Microelectronics Corporation         | D                | Equity           |
| UMH           | UMH Properties, Inc.                        | D                | Equity           |
| UNFI          | UNITED NATURAL FOODS, INC.                  | D                | Equity           |
| UNG           | UNITED STATES NATURAL GAS                   | D                | ETF              |
| UNH           | UNITEDHEALTH GROUP INCORPORATED             | D                | Equity           |
| UNIT          | Uniti Group Inc.                            | D                | Equity           |
| UNM           | Unum Group                                  | D                | Equity           |
| UNP           | UNION PACIFIC CORPORATION                   | D                | Equity           |
| UONE          | URBAN ONE INC                               | D                | Equity           |
| UONEK         | URBAN ONE INC                               | D                | Equity           |
| UP            | Wheels Up Experience Inc.                   | D                | Equity           |
| UPBD          | Upbound Group, Inc.                         | D                | Equity           |
| UPLD          | Upland Software, Inc.                       | D                | Equity           |
| UPRO          | ProShares Ultrapro S&P 500                  | D                | ETF              |
| UPS           | UNITED PARCEL SERVICE, INC.                 | D                | Equity           |
| UPST          | UPSTART HOLDINGS, INC.                      | D                | Equity           |
| UPWK          | Upwork Inc.                                 | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                    | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| URA           | Global X Uranium ETF                   | D                | ETF              |
| URBN          | URBAN OUTFITTERS INC                   | D                | Equity           |
| URGN          | Urogen Pharma Ltd                      | D                | Equity           |
| URI           | UNITED RENTALS, INC.                   | D                | Equity           |
| URNJ          | SPROTT JUNIOR URANIUM MINERS ETF       | D                | ETF              |
| URNM          | NORTHSHORE GLOBAL URANIUM MINING ETF   | D                | ETF              |
| UROY          | URANIUM ROYALTY CORP                   | D                | Equity           |
| URTY          | ProShares UltraPro Russell2000         | D                | ETF              |
| USAC          | USA COMPRESSION PARTNERS, L.P.         | D                | Equity           |
| USAR          | USA RARE EARTH, INC.                   | D                | Equity           |
| USAU          | U.S. GOLD CORP.                        | D                | Equity           |
| USB           | U.S. BANCORP                           | D                | Equity           |
| USD           | ProShares Ultra Semiconductors         | D                | ETF              |
| USFD          | US Foods Holding Corp.                 | D                | Equity           |
| USIO          | USIO, INC.                             | D                | Equity           |
| USM           | U.S. Cellular Corporation              | D                | Equity           |
| USMV          | iShares MSCI USA Minimum Volatility    | D                | ETF              |
| USO           | UNITED STATES OIL FUND                 | D                | ETF              |
| UTHR          | UNITED THERAPEUTICS CORP               | D                | Equity           |
| UTI           | Universal Technical Institute, Inc.    | D                | Equity           |
| UTZ           | Utz Brands, Inc.                       | D                | Equity           |
| UUP           | POWERSHARES DB US DOLLAR INDEX BULLISH | D                | ETF              |
| UUUU          | Energy Fuels Inc.                      | D                | Equity           |
| UVE           | UNIVERSAL INSURANCE HOLDINGS, INC.     | D                | Equity           |
| UVIX          | 2X LONG VIX FUTURES ETF                | D                | ETF              |
| UVV           | UNIVERSAL CORPORATION                  | D                | Equity           |
| UVXY          | PROSHARES ULTRA VIX SHORT-TERM FUT ETF | D                | ETF              |
| UWM           | ProShares Ultra Russell2000            | D                | ETF              |
| UWMC          | UWM Holdings Corporation               | D                | Equity           |
| UYG           | ProShares Ultra Financials             | D                | ETF              |
| V             | VISA INC.                              | D                | Equity           |
| VAC           | Marriott Vacations Worldwide Corp.     | D                | Equity           |
| VAL           | VALARIS LIMITED                        | D                | Equity           |
| VALE          | VALE S.A.                              | D                | Equity           |
| VB            | Vanguard Small-Cap ETF                 | D                | ETF              |
| VBK           | Vanguard Small-Cap Growth ETF          | D                | Equity           |
| VBR           | Vanguard Small-Cap Value ETF           | D                | ETF              |
| VBTX          | Veritex Holdings Inc                   | D                | Equity           |
| VC            | Visteon Corp.                          | D                | Equity           |
| VCEL          | Vericel Corporation                    | D                | Equity           |
| VCLT          | Vanguard Long-Term Corporate Bond ETF  | D                | ETF              |
| VCYT          | Veracyte, Inc.                         | D                | Equity           |
| VDE           | Vanguard Energy ETF                    | D                | ETF              |
| VEA           | Vanguard FTSE Developed Markets ETF    | D                | ETF              |
| VECO          | VEECO INSTRUMENTS                      | D                | Equity           |
| VEEV          | VEEVA SYSTEMS INC.                     | D                | Equity           |
| VEL           | VELOCITY FINANCIAL, INC                | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                   | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---------------------------------------|------------------|------------------|
| VERA          | VERA THERAPEUTICS INC. CL A           | D                | Equity           |
| VERI          | Veritone, Inc.                        | D                | Equity           |
| VERU          | Veru Inc                              | D                | Equity           |
| VERV          | VERVE THERAPEUTICS INC                | D                | Equity           |
| VERX          | VERTEX, INC.                          | D                | Equity           |
| VET           | Vermilion Energy Inc                  | D                | Equity           |
| VFC           | VF CORPORATION                        | D                | Equity           |
| VFF           | Village Farms International, Inc.     | D                | Equity           |
| VFH           | Vanguard Financials ETF               | D                | ETF              |
| VFS           | VINFAST AUTO LTD.                     | D                | Equity           |
| VG            | Venture Global, Inc.                  | D                | Equity           |
| VGK           | Vanguard FTSE Europe ETF              | D                | ETF              |
| VGLT          | VANGUARD LONG-TERM TREASURY ETF       | D                | ETF              |
| VGT           | Vanguard Information Technology ETF   | D                | Equity           |
| VGZ           | Vista Gold Corp.                      | D                | Equity           |
| VHT           | Vanguard Health Care ETF              | D                | ETF              |
| VIAV          | Viavi Solutions Inc.                  | D                | Equity           |
| VICI          | VICI Properties Inc.                  | D                | Equity           |
| VICR          | Vicor Corporation                     | D                | Equity           |
| VIG           | Vanguard Dividend Appreciation ETF    | D                | ETF              |
| VIK           | Viking Holdings Ltd Ordinary Shares   | D                | Equity           |
| VIPS          | VIPSHOP HOLDINGS LIMITED              | D                | Equity           |
| VIR           | Vir Biotechnology, Inc.               | D                | Equity           |
| VIRC          | VIRCO MFG CORP                        | D                | Equity           |
| VIRT          | Virtu Financial, Inc.                 | D                | Equity           |
| VIST          | VISTA OIL & GAS SAB DE CV             | D                | Equity           |
| VITL          | VITAL FARMS, INC.                     | D                | Equity           |
| VIXM          | ProShares VIX Mid-Term Futures        | D                | ETF              |
| VIXY          | ProShares VIX Short-Term Futures ETF  | D                | ETF              |
| VKTX          | Viking Therapeutics, Inc.             | D                | Equity           |
| VLN           | VALENS SEMICONDUCTOR LTD.             | D                | Equity           |
| VLO           | VALERO ENERGY CORPORATION             | D                | Equity           |
| VLRS          | Controladora Vuela Compania de        | D                | Equity           |
| VLTO          | VERALTO CORP                          | D                | Equity           |
| VLY           | VALLEY NATIONAL BANCORP               | D                | Equity           |
| VMC           | VULCAN MATERIALS COMPANY              | D                | Equity           |
| VMEO          | VIMEO, INC.                           | D                | Equity           |
| VMI           | Valmont Industries, Inc.              | D                | Equity           |
| VNDA          | Vanda Pharmaceuticals, Inc.           | D                | Equity           |
| VNET          | 21Vianet Group Inc                    | D                | Equity           |
| VNO           | VORNADO REALTY TRUST                  | D                | Equity           |
| VNOM          | Viper Energy Partners LP              | D                | Equity           |
| VNQ           | Vanguard REIT ETF                     | D                | ETF              |
| VNT           | VONTIER CORP                          | D                | Equity           |
| VO            | Vanguard Mid-Cap ETF                  | D                | ETF              |
| VOC           | Voc Energy Trust                      | D                | Equity           |
| VOD           | VODAFONE GROUP PUBLIC LIMITED COMPANY | D                | Equity           |

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| <b>Symbol</b> | <b>Company Name</b>                                | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|--|------------------|------------------|
| VOO           | Vanguard S&P 500 ETF                               | D                | ETF              |
| VOR           | VOR BIOPHARMA, INC.                                | D                | Equity           |
| VOYA          | VOYA FINANCIAL INC.                                | D                | Equity           |
| VPG           | Vishay Precision Group, Inc.                       | D                | Equity           |
| VPU           | Vanguard Utilities Index Fund ETF                  | D                | ETF              |
| VRA           | Vera Bradley, Inc.                                 | D                | Equity           |
| VRAR          | THE GLIMPSE GROUP INC                              | D                | Equity           |
| VRCA          | VERRICA PHARMACEUTICALS INC.                       | D                | Equity           |
| VRDN          | VIRIDIAN THERAPEUTICS, INC.                        | D                | Equity           |
| VREX          | Varex Imaging Corporation                          | D                | Equity           |
| VRNA          | VERONA PHARMA PLC                                  | D                | Equity           |
| VRNS          | Varonis Systems, Inc.                              | D                | Equity           |
| VRNT          | Verint Systems, Inc.                               | D                | Equity           |
| VRRM          | VERRA MOBILITY CORP.                               | D                | Equity           |
| VRSK          | Verisk Analytics, Inc.                             | D                | Equity           |
| VRSN          | VERISIGN, INC.                                     | D                | Equity           |
| VRT           | VERTIV HOLDINGS CO                                 | D                | Equity           |
| VRTX          | VERTEX PHARMACEUTICALS INCORPORATED                | D                | Equity           |
| VSAT          | ViaSat, Inc.                                       | D                | Equity           |
| VSCO          | VICTORIAS SECRET & CO                              | D                | Equity           |
| VSH           | VISHAY INTERTECHNOLOGY                             | D                | Equity           |
| VST           | Vistra Energy Corp.                                | D                | Equity           |
| VSTM          | Verastem, Inc.                                     | D                | Equity           |
| VSTS          | VESTIS CORPORATION                                 | D                | Equity           |
| VT            | Vanguard Total World Stock ETF                     | D                | ETF              |
| VTEB          | Vanguard Tax-Exempt Bond Index Fund ETF Shares     | D                | ETF              |
| VTEX          | VTEX   | D                | Equity           |
| VTGN          | VISTAGEN THERAPEUTICS, INC.                        | D                | Equity           |
| VTI           | Vanguard Total Stock Market ETF                    | D                | ETF              |
| VTIP          | VANGUARD SHORT-TERM INFLATION-PROTECTED SECURITIES | D                | ETF              |
| VTLE          | Vital Energy, Inc.                                 | D                | Equity           |
| VTR           | Ventas, Inc.                                       | D                | Equity           |
| VTRS          | Viatis Inc.  | D                | Equity           |
| VTS           | VITESSE ENERGY, INC.                               | D                | Equity           |
| VTSI          | VIRTRA, INC.                                       | D                | Equity           |
| VTV           | Vanguard Value ETF                                 | D                | ETF              |
| VTWO          | Vanguard Russell 2000 ETF                          | D                | ETF              |
| VTYX          | VENTYX BIOSCIENCES, INC.                           | D                | Equity           |
| VUG           | Vanguard Growth ETF                                | D                | ETF              |
| VUZI          | Vuzix Corporation                                  | D                | Equity           |
| VV            | Vanguard Large-Cap ETF                             | D                | ETF              |
| VVV           | Valvoline Inc.                                     | D                | Equity           |
| VWO           | Vanguard MSCI Emerging Markets ETF                 | D                | ETF              |
| VXRT          | VAXART, INC.                                       | D                | Equity           |
| VXUS          | Vanguard Total International Stock ETF             | D                | ETF              |
| VXX           | iPath Series B S&P 500 VIX Short-Term Futures ETN  | D                | ETF              |
| VXZ           | iPath Series B S&P 500 VIX Mid-Term Futures ETN    | D                | ETF              |

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|---------------|--|------------------|------------------|
| VYGR          | Voyager Therapeutics, Inc.                       | D                | Equity           |
| VYM           | Vanguard High Dividend Yield ETF                 | D                | ETF              |
| VYX           | NCR Voyix Corporation                            | D                | Equity           |
| VZ            | VERIZON COMMUNICATIONS INC.                      | D                | Equity           |
| W             | Wayfair Inc.                                     | D                | Equity           |
| WAB           | Westinghouse Air Brake Technologies Corporation  | D                | Equity           |
| WAL           | Western Alliance Bancorp                         | D                | Equity           |
| WAT           | WATERS CORPORATION                               | D                | Equity           |
| WAY           | Waystar Holding Corp.                            | D                | Equity           |
| WB            | WEIBO CORP. (ADR)                                | D                | Equity           |
| WBA           | Walgreens Boots Alliance, Inc.,                  | D                | Equity           |
| WBD           | Warner Bros. Discovery, Inc.                     | D                | Equity           |
| WBS           | WEBSTER FINANCIAL CORPORATION                    | D                | Equity           |
| WBX           | Wallbox N.V.                                     | D                | Equity           |
| WCC           | WESCO INTERNATIONAL                              | D                | Equity           |
| WCLD          | WISDOMTREE CLOUD COMPUTING FUND                  | D                | ETF              |
| WCN           | Waste Connections Inc.                           | D                | Equity           |
| WD            | Walker & Dunlop, Inc.                            | D                | Equity           |
| WDAY          | Workday, Inc.                                    | D                | Equity           |
| WDC           | WESTERN DIGITAL CORPORATION                      | D                | Equity           |
| WDFC          | WD-40 Company                                    | D                | Equity           |
| WDS           | WOODSIDE ENERGY GROUP LTD                        | D                | Equity           |
| WEAT          | Teucrium Wheat ETF                               | D                | ETF              |
| WEAV          | WEAVE COMMUNICATIONS, INC.                       | D                | Equity           |
| WEBL          | DIREXION DAILY DOW JONES INTERNET BULL 3X SHARES | D                | ETF              |
| WEC           | WISCONSIN ENERGY CORP.                           | D                | Equity           |
| WELL          | Welltower Inc.                                   | D                | Equity           |
| WEN           | The Wendy's Company                              | D                | Equity           |
| WERN          | WERNER ENTERPRISES INC.                          | D                | Equity           |
| WES           | Western Midstream Partners L.P.                  | D                | Equity           |
| WEST          | Westrock Coffee Company                          | D                | Equity           |
| WEX           | WEX Inc.   | D                | Equity           |
| WFC           | WELLS FARGO & COMPANY                            | D                | Equity           |
| WFG           | WEST FRASER TIMBER CO. LTD.                      | D                | Equity           |
| WFRD          | WEATHERFORD INTERNATIONAL PLC                    | D                | Equity           |
| WGMI          | VALKYRIE BITCOIN MINERS ETF                      | D                | ETF              |
| WGO           | WINNEBAGO INDUSTRIES, INC                        | D                | Equity           |
| WGS           | GeneDx Holdings Corporation                      | D                | Equity           |
| WH            | Wyndham Hotels & Resorts, Inc.                   | D                | Equity           |
| WHD           | Cactus Inc                                       | D                | Equity           |
| WHR           | WHIRLPOOL CORPORATION                            | D                | Equity           |
| WING          | Wingstop Inc.                                    | D                | Equity           |
| WIT           | WIPRO LTD.                                       | D                | Equity           |
| WIX           | WIX.COM LTD.                                     | D                | Equity           |
| WK            | Workiva Inc.                                     | D                | Equity           |
| WKC           | World Kinect Corporation                         | D                | Equity           |
| WLDN          | WILLDAN GROUP INC                                | D                | Equity           |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                         | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| WLK           | Westlake Chemical Corp                      | D                | Equity           |
| WLKP          | Westlake Chemical Partners LP               | D                | Equity           |
| WLY           | John Wiley & Sons, Inc.                     | D                | Equity           |
| WM            | WASTE MANAGEMENT, INC.                      | D                | Equity           |
| WMB           | WILLIAMS COMPANIES, INC.                    | D                | Equity           |
| WMG           | Warner Music Group Corp.                    | D                | Equity           |
| WMS           | Advanced Drainage Systems, Inc.             | D                | Equity           |
| WMT           | WAL-MART INC.                               | D                | Equity           |
| WNC           | WABASH NATIONAL CORP.                       | D                | Equity           |
| WNS           | WNS Holdings Ltd                            | D                | Equity           |
| WOLF          | Wolfspeed, Inc.                             | D                | Equity           |
| WOOF          | PETCO HEALTH AND WELLNESS COMPANY, INC.     | D                | Equity           |
| WOR           | WORTHINGTON INDUSTRIES, INC.                | D                | Equity           |
| WOW           | WideOpenWest, Inc.                          | D                | Equity           |
| WPC           | W.P. Carey Inc.                             | D                | Equity           |
| WPM           | Wheaton Precious Metals Corporation         | D                | Equity           |
| WPP           | WPP plc                                     | D                | Equity           |
| WPRT          | WESTPORT INNOVATIONS INC.                   | D                | Equity           |
| WRAP          | Wrap Technologies, Inc.                     | D                | Equity           |
| WRB           | BERKLEY(WR) CORP                            | D                | Equity           |
| WRBY          | WARBY PARKER, INC.                          | D                | Equity           |
| WSC           | WillScot Corporation                        | D                | Equity           |
| WSM           | WILLIAMS-SONOMA INC                         | D                | Equity           |
| WSO           | WATSCO INC                                  | D                | Equity           |
| WSR           | Whitestone REIT                             | D                | Equity           |
| WST           | West Pharmaceutical Services Inc            | D                | Equity           |
| WT            | WisdomTree, Inc.                            | D                | Equity           |
| WTI           | W&T OFFSHORE INC                            | D                | Equity           |
| WTRG          | Essential Utilities, Inc.                   | D                | Equity           |
| WTTR          | Select Energy Services, Inc.                | D                | Equity           |
| WTW           | Willis Towers Watson Public Limited Company | D                | Equity           |
| WU            | THE WESTERN UNION COMPANY                   | D                | Equity           |
| WULF          | TERAWULF INC.                               | D                | Equity           |
| WVE           | WAVE Life Sciences Ltd                      | D                | Equity           |
| WWD           | Woodward, Inc.                              | D                | Equity           |
| WWR           | WESTWATER RESOURCES INC                     | D                | Equity           |
| WWW           | WOLVERINE WORLD WIDE INC                    | D                | Equity           |
| WY            | WEYERHAEUSER COMPANY                        | D                | Equity           |
| WYNN          | WYNN RESORTS LTD.                           | D                | Equity           |
| WYY           | WIDEPOINT CORPORATION                       | D                | Equity           |
| X             | UNITED STATES STEEL CORPORATION             | D                | Equity           |
| XAIR          | BEYOND AIR INC                              | D                | Equity           |
| XBI           | SPDR S&P Biotech ETF                        | D                | ETF              |
| XEL           | XCEL ENERGY INC                             | D                | Equity           |
| XENE          | Xenon Pharmaceuticals Inc.                  | D                | Equity           |
| XERS          | Xeris Biopharma Holdings, Inc.              | D                | Equity           |
| XES           | SPDR S&P Oil & Gas Equipment & Svcs ETF     | D                | ETF              |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                               | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| XGN           | EXAGEN, INC.                                      | D                | Equity           |
| XHB           | SPDR S&P HOMEBUILDERS                             | D                | ETF              |
| XIFR          | XPLR Infrastructure, LP                           | D                | Equity           |
| XLB           | MATERIALS SELECT SECTOR SPDR                      | D                | ETF              |
| XLC           | Communication Services Select Sect SPDR ETF       | D                | ETF              |
| XLE           | ENERGY SELECT SECTOR SPDR                         | D                | ETF              |
| XLF           | FINANCIAL SELECT SECTOR SPDR                      | D                | ETF              |
| XLG           | INVESCO S&P 500 TOP 50 ETF                        | D                | ETF              |
| XLI           | INDUSTRIAL SELECT SECTOR SPDR                     | D                | ETF              |
| XLK           | TECHNOLOGY SELECT SECTOR SPDR                     | D                | ETF              |
| XLP           | CONSUMER STAPLES SELECT SECTOR SPDR               | D                | ETF              |
| XLRE          | Real Estate Select Sector SPDR                    | D                | ETF              |
| XLU           | UTILITIES SELECT SECTOR SPDR                      | D                | ETF              |
| XLV           | HEALTH CARE SELECT SECTOR SPDR                    | D                | ETF              |
| XLY           | CONSUMER DISCRETIONARY SELECT SPDR                | D                | ETF              |
| XME           | SPDR S&P METALS & MINING                          | D                | ETF              |
| XMTR          | XOMETRY INC.                                      | D                | Equity           |
| XNET          | Xunlei Limited                                    | D                | Equity           |
| XOM           | EXXON MOBIL CORPORATION                           | D                | Equity           |
| XOP           | SPDR S&P OIL & GAS EXPLORATION & PROD             | D                | ETF              |
| XP            | XP Inc.   | D                | Equity           |
| XPEL          | XPEL, INC.  | D                | Equity           |
| XPEV          | XPENG, INC. ADR CLASS A                           | D                | Equity           |
| XPO           | XPO Logistics, Inc.                               | D                | Equity           |
| XPOF          | XPONENTIAL FITNESS, INC                           | D                | Equity           |
| XPRO          | Expro Group Holdings N.V.                         | D                | Equity           |
| XRAY          | DENTSPLY INTL, INC.                               | D                | Equity           |
| XRT           | SPDR S&P RETAIL                                   | D                | ETF              |
| XRX           | XEROX CORPORATION                                 | D                | Equity           |
| XSD           | SPDR S&P Semiconductor ETF                        | D                | ETF              |
| XSHD          | INVESCO S&P SMALLCAP HIGH DIV LOW VOLATILITY ETF  | D                | ETF              |
| XYL           | Xylem Inc.  | D                | Equity           |
| XYLD          | GLOBAL X S&P 500 COVERED CALL ETF                 | D                | ETF              |
| XYZ           | Block, Inc.                                       | D                | Equity           |
| YALA          | YALLA GROUP LIMITED                               | D                | Equity           |
| YANG          | Direxion Daily FTSE China Bear 3x Shares          | D                | ETF              |
| YCL           | ProShares Ultra Yen                               | D                | ETF              |
| YCS           | ProShares UltraShort Yen                          | D                | ETF              |
| YELP          | YELP, INC.  | D                | Equity           |
| YETI          | YETI Holdings, Inc.                               | D                | Equity           |
| YEXT          | Yext, Inc.  | D                | Equity           |
| YINN          | Direxion Daily China 3X Bull Shares               | D                | ETF              |
| YMAB          | Y-MABS THERAPEUTICS INC                           | D                | Equity           |
| YMAG          | YIELDMAX MAGNIFICENT 7 FUND OF OPTION INCOME ETFS | D                | ETF              |
| YMAX          | YieldMax Universe Fund of Option Income ETFs      | D                | ETF              |
| YMM           | FULL TRUCK ALLIANCE CO. LTD.                      | D                | Equity           |
| YOLO          | ADVISORSHARES PURE CANNABIS ETF                   | D                | ETF              |

**Emerald Securities List as of 6/2/2025**

| <b>Symbol</b> | <b>Company Name</b>                                 | <b>List Exch</b> | <b>Inst Type</b> |
|---------------|---|------------------|------------------|
| YOU           | CLEAR SECURE, INC                                   | D                | Equity           |
| YPF           | YPF S.A.  | D                | Equity           |
| YRD           | Yirendai Ltd.                                       | D                | Equity           |
| YSG           | YATSEN HOLDING LTD                                  | D                | Equity           |
| YUM           | YUM! BRANDS, INC.                                   | D                | Equity           |
| YUMC          | Yum China Holdings, Inc.                            | D                | Equity           |
| Z             | ZILLOW GROUP, INC.                                  | D                | Equity           |
| ZBH           | Zimmer Bionet Holdings, Inc.                        | D                | Equity           |
| ZBRA          | ZEBRA TECHNOLOGIES CORP.                            | D                | Equity           |
| ZD            | Ziff Davis, Inc.                                    | D                | Equity           |
| ZDGE          | ZEDGE INC   | D                | Equity           |
| ZETA          | ZETA GLOBAL HOLDINGS CORP.                          | D                | Equity           |
| ZG            | Zillow Group, Inc                                   | D                | Equity           |
| ZH            | ZHIHU INC   | D                | Equity           |
| ZIM           | ZIM INTEGRATED SHIPPING SERVICE                     | D                | Equity           |
| ZION          | ZIONS BANCORP                                       | D                | Equity           |
| ZIP           | ZIPRECRUITER, INC                                   | D                | Equity           |
| ZK            | ZEEKR Intelligent Technology Holding Limited        | D                | Equity           |
| ZLAB          | ZAI LAB LTD   | D                | Equity           |
| ZM            | Zoom Video Communications. Inc.                     | D                | Equity           |
| ZNTL          | ZENTALIS PHARMACEUTICALS, INC.                      | D                | Equity           |
| ZROZ          | PIMCO 25+ Year Zero Coupon U.S. Treasury Index Fund | D                | ETF              |
| ZS            | Zscaler, Inc.                                       | D                | Equity           |
| ZSL           | ProShares UltraShort Silver (20 shares)             | D                | ETF              |
| ZTO           | ZTO Express (Cayman) Inc.                           | D                | Equity           |
| ZTS           | ZOETIS INC.   | D                | Equity           |
| ZUMZ          | ZUMIEZ INC  | D                | Equity           |
| ZVIA          | ZEVIA PBC   | D                | Equity           |
| ZVRA          | Zevra Therapeutics, Inc.                            | D                | Equity           |
| ZWS           | Zurn Water Solutions Corporation                    | D                | Equity           |
| ZYME          | Zymeworks Inc                                       | D                | Equity           |
| ZYXI          | Zynex, Inc.   | D                | Equity           |