

AppendixExecution Venue Rank and Tier**Equity Execution Venue Rank and Tier**

| <b>Market Participant</b>                       | <b>Market Share of Share Volume<sup>1</sup></b> | <b>Rank</b> | <b>Tier</b> |
|---|---|-------------|-------------|
| OTC LINK ATS                                    | 29.90%  | 1           | 1           |
| Financial Industry Regulatory Authority, Inc.   | 16.50%  | 2           | 1           |
| The NASDAQ Stock Market LLC                     | 9.67%   | 3           | 1           |
| New York Stock Exchange LLC                     | 9.08%   | 4           | 1           |
| NYSE Arca, Inc.                                 | 7.05%   | 5           | 1           |
| Bats EDGX Exchange, Inc.                        | 4.89%   | 6           | 1           |
| Bats BZX Exchange, Inc.                         | 4.24%   | 7           | 1           |
| Bats BYX Exchange, Inc.                         | 3.06%   | 8           | 1           |
| NASDAQ BX, Inc.                                 | 1.85%   | 9           | 1           |
| UBS ATS   | 1.78%   | 10          | 1           |
| Bats EDGA Exchange, Inc.                        | 1.69%   | 11          | 1           |
| Investors' Exchange, LLC                        | 1.25%   | 12          | 1           |
| CROSSFINDER                                     | 1.09%   | 13          | 1           |
| SUPERX  | 0.79%   | 14          | 2           |
| MS POOL (ATS-4)                                 | 0.68%   | 15          | 2           |
| NASDAQ PHLX LLC                                 | 0.66%   | 16          | 2           |
| J.P. MORGAN ATS ("JPM-X")                       | 0.56%   | 17          | 2           |
| LEVEL ATS                                       | 0.49%   | 18          | 2           |
| INSTINCT X                                      | 0.48%   | 19          | 2           |
| BIDS TRADING L.P.                               | 0.44%   | 20          | 2           |
| BARCLAYS ATS ("LX")                             | 0.43%   | 21          | 2           |
| KCG MATCHIT                                     | 0.42%   | 22          | 2           |
| SIGMA X   | 0.39%   | 23          | 2           |
| INSTINET CONTINUOUS BLOCK CROSSING SYSTEM (CBX) | 0.34%   | 24          | 2           |
| Chicago Stock Exchange, Inc.                    | 0.31%   | 25          | 2           |
| POSIT   | 0.30%   | 26          | 2           |
| CROSSSTREAM                                     | 0.25%   | 27          | 2           |
| MS TRAJECTORY CROSS (ATS-1)                     | 0.16%   | 28          | 2           |
| NYSE MKT LLC                                    | 0.14%   | 29          | 2           |
| LIQUIDNET ATS                                   | 0.13%   | 30          | 2           |

<sup>1</sup> Based on November 2016 through January 2017 volume sourced from Bats and FINRA.

| Market Participant                              | Market Share of Share Volume <sup>1</sup> | Rank | Tier |
|---|---|------|------|
| IBKR ATS  | 0.13%                                     | 31   | 2    |
| MILLENNIUM                                      | 0.12%                                     | 32   | 2    |
| GLOBAL OTC                                      | 0.12%                                     | 33   | 2    |
| DEALERWEB, INC.                                 | 0.11%                                     | 34   | 2    |
| CITICROSS                                       | 0.09%                                     | 35   | 2    |
| BLOCKCROSS ATS                                  | 0.08%                                     | 36   | 2    |
| LIQUIDNET H2O ATS                               | 0.07%                                     | 37   | 2    |
| CODA MARKETS, INC.                              | 0.07%                                     | 38   | 2    |
| INSTINET CROSSING, INSTINET BLX                 | 0.06%                                     | 39   | 2    |
| LUMINEX TRADING & ANALYTICS LLC                 | 0.03%                                     | 40   | 2    |
| LIGHT POOL                                      | 0.02%                                     | 41   | 2    |
| MS RETAIL POOL                                  | 0.02%                                     | 42   | 2    |
| CITIBLOC  | 0.02%                                     | 43   | 2    |
| NYSE National, Inc.                             | 0.01%                                     | 44   | 2    |
| USTOCKTRADE SECURITIES, INC.                    | 0.01%                                     | 45   | 2    |
| AQUA SECURITIES L.P.                            | 0.0047%                                   | 46   | 2    |
| XE  | 0.0037%                                   | 47   | 2    |
| LIQUIFI   | 0.0014%                                   | 48   | 2    |
| VARIABLE INVESTMENT ADVISORS, INC. ATS (VIAATS) | 0.000073%                                 | 49   | 2    |
| BARCLAYS DIRECTEX                               | 0.0000303%                                | 50   | 2    |
| FNC AG STOCK, LLC                               | 0.0000225%                                | 51   | 2    |
| AX TRADING, LLC                                 | 0.0000026%                                | 52   | 2    |
| PRO SECURITIES ATS                              | 0.0000002%                                | 53   | 2    |

### Options Execution Venue Rank and Tier

| Market Participant                           | Market Share of Share Volume (Options Contracts) <sup>2</sup> | Rank | Tier |
|--|---|------|------|
| NASDAQ PHLX LLC                              | 16.68%  | 1    | 1    |
| Chicago Board Options Exchange, Incorporated | 16.08%  | 2    | 1    |
| Bats BZX Options Exchange, Inc.              | 11.53%  | 3    | 1    |
| Nasdaq ISE, LLC                              | 10.63%  | 4    | 1    |
| NYSE Arca, Inc.                              | 9.52%   | 5    | 1    |
| The NASDAQ Options Market LLC                | 9.01%   | 6    | 1    |
| NYSE MKT LLC                                 | 8.01%   | 7    | 1    |
| Miami International Securities Exchange,     | 5.84%   | 8    | 1    |

<sup>2</sup> Based on November 2016 through January 2017 volume sourced from Bats.

| <b>Market Participant</b>                         | <b>Market Share of</b> | <b>Rank</b> | <b>Tier</b> |
|---|------------------------|-------------|-------------|
| LLC   |                        |             |             |
| Nasdaq GEMX, LLC                                  | 4.16%                  | 9           | 1           |
| Chicago Board Options Exchange,<br>Incorporated 2 | 3.33%                  | 10          | 1           |
| BOX Options Exchange LLC                          | 3.02%                  | 11          | 1           |
| Bats EDGX Options Exchange, Inc.                  | 1.31%                  | 12          | 2           |
| NASDAQ BX, Inc.                                   | 0.67%                  | 13          | 2           |
| Nasdaq MRX, LLC                                   | 0.21%                  | 14          | 2           |
| MIAX PEARL, LLC                                   | N/A <sup>3</sup>       | 15          | 2           |

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<sup>3</sup> No market statistics as of January 2017. Launched trading operations on February 6, 2017.