



Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 9

MEETING DATE: August 16, 2017

SUBJECT: Quarterly Trading Activity and Commission Recapture Report – Second Quarter 2017

SUBMITTED FOR: Consent Deliberation and Action Receive and File

RECOMMENDATION

Staff recommends the Board receive and file the Quarterly Trading Activity and Commission Recapture Report for the quarter ending June 30, 2017.

PURPOSE

This agenda item complies with SCERS' investment policy statement reporting requirements and provides a summary of SCERS' investment manager trade execution and Elkins / McSherry Quarterly Trade Cost Summary Report.

DISCUSSION

SCERS engages Elkins / McSherry ("EM"), a State Street company, to track SCERS' equity and fixed income trading activity and to monitor manager trade execution. EM analyzes a manager's trade activity against like managers across EM's universe of approximately 1,400 institutional investors.

EM's trade analysis report will highlight potential manager trading issues and, if they occur over two or more quarters, Staff will discuss compliance with the manager. The EM trading cost reports will analyze and compare the following:

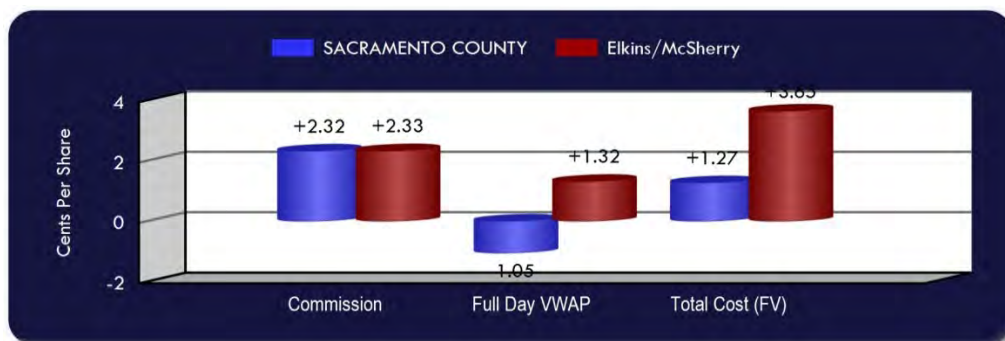
1. Commission costs, trade costs, and any soft dollar amounts.
2. Market Impact Cost, an industry performance metric, which measures the difference between a manager's trade price and the market's volume weighted average price (VWAP). VWAP is the average security price weighted by the share volume traded that day.
3. Total trading costs.

Industry metrics used to measure trade performance include "cps" (cents per share) and "bps" (basis points = 1/100th of one percent).

SCERS TRADE COST SUMMARY

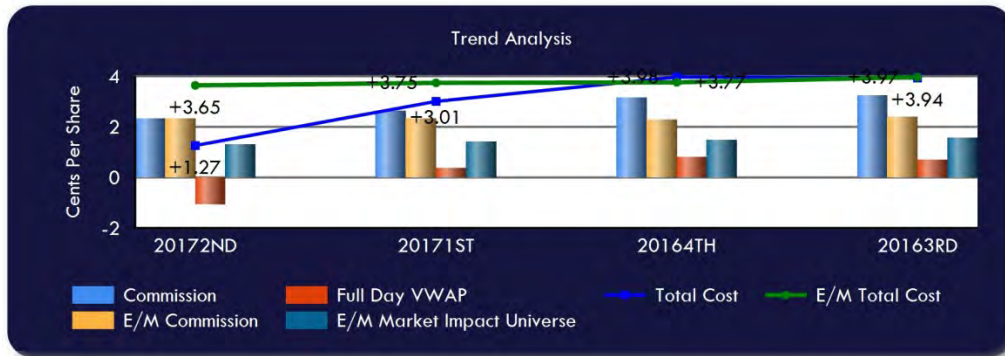
U.S. EQUITY

- SCERS' U.S. equity managers traded 5.3 million shares across the AMEX, NASDAQ and NYSE exchanges totaling \$199.3 million, and ranked in the 54th percentile among the EM U.S. Equity universe.
- SCERS' total trading cost equaled +1.27 cps, which is +2.38 cps lower than the peer group, as follows:
 - Commission cost of +2.32 cps versus +2.33 cps.
 - Market impact cost of -1.05 cps versus +1.32 cps.
- As illustrated below, SCERS' trading costs were better than 85% of the peer group.



- A majority of SCERS' U.S. Equity managers experienced unfavorable commission costs compared to the U.S. Equity peer group. Managers with commission costs greater than the average peer group cost of +2.33 cps include:
 - Weatherbie at +2.84 cps.
 - Brown Advisors at +2.66 cps.
 - CenterSquare at +2.95 cps.
 - DGHM at +4.10 cps.
 - Eagle Capital at +2.61 cps.
 - UBS Global at +2.35 cps.
 - Wedge Capital at +3.06 cps.

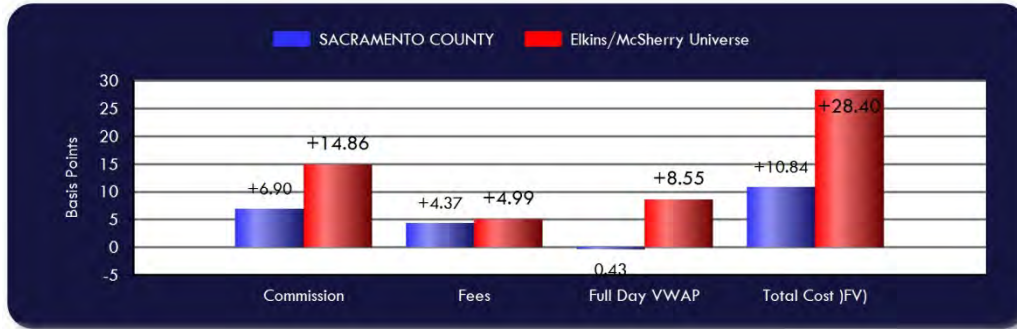
- As illustrated below, until the current quarter, SCERS’ managers had been experiencing higher commission costs than the peer group.



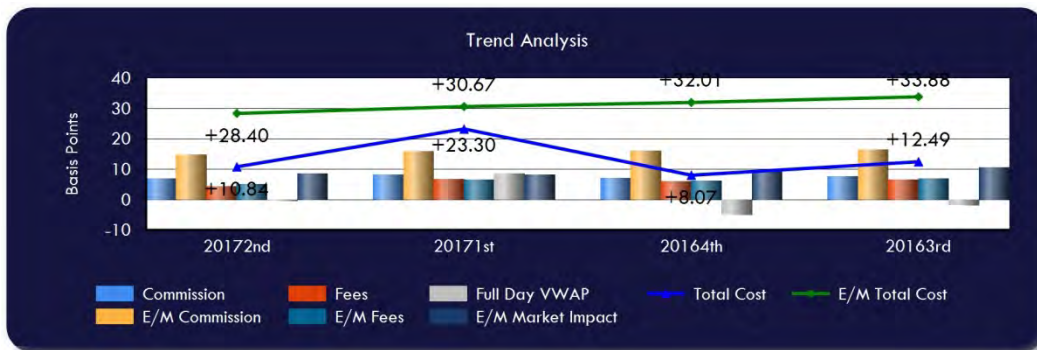
- The U.S. small cap managers (Weatherbie, UBS Global, DGHM, and Wedge Capital) and the U.S. REIT manager (CenterSquare) will typically incur additional commission costs in the form of a soft dollar relationship where, in return for conducting trades through a brokerage firm, the manager receives the brokerage firm’s research, generally an additional +2.0 cps.
- According to Elkins / McSherry, the average commission for the Bundled (Research Dollars) commission universe is +3.59 cps, which is higher than SCERS’ U.S. Small Cap managers, except:
 - DGHM commission cost of +4.10 cps, which was the highest cost among SCERS’ equity managers. Staff will discuss with DGHM.
- The majority of SCERS’ U.S. Equity managers experienced favorable market impact costs compared to the peer group cost of +1.32 cps, except the following managers:
 - Weatherbie at +1.89 cps.
 - Brown Advisors at +2.24 cps.
 - Eagle Capital at +4.39 cps.

GLOBAL EQUITY

- SCERS’ International Equity managers traded 23.2 million shares totaling \$199.4 million across 34 countries.
- Total trading cost equaled +10.84 bps, which is +17.56 bps lower than the peer group, as follows:
 - Commission cost of +6.90 bps versus +7.64 bps.
 - Fees (country taxes, tariffs) of +4.37 bps versus +4.99 bps.
 - Market impact cost of -0.43 bps versus +8.55 bps.



- All of SCERS’ International Equity managers generated commission costs (ranging from +1.59 bps to +9.18 bps); significantly less than the EM peer group (ranging from +13.95 bps to +15.18 bps). This result is consistent with the previous quarters’ lower trade costs versus the peer group, as illustrated below.

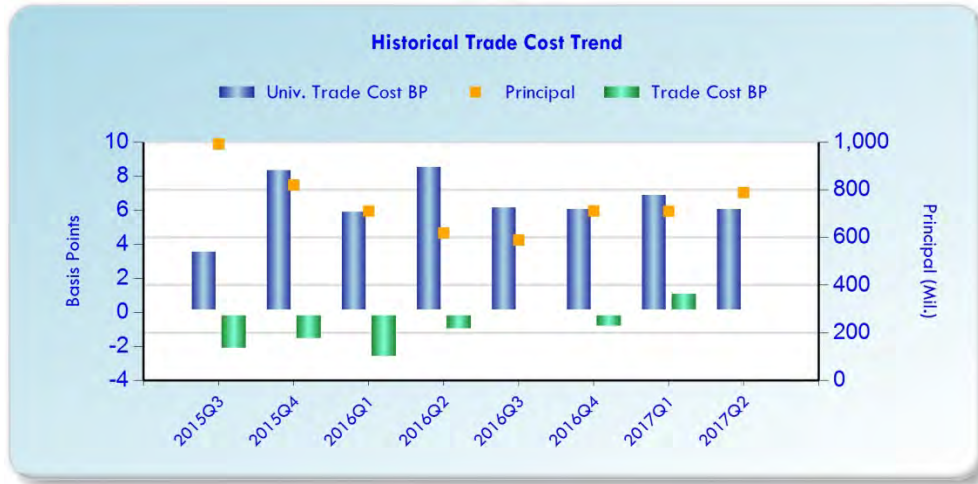


- The only International Equity manager to experience an unfavorable market impact cost versus the peer group was:
 - S&P Global Infrastructure at +7.56 bps versus +7.25 bps.

U.S. FIXED INCOME

- SCERS’ U.S. Fixed Income managers conducted 849 trades totaling \$789.0 million, as follows:
 - Governments - 256 trades totaling \$399 million.
 - Mortgages - 513 trades totaling \$345 million.
 - Corporates - 79 trades totaling \$45 million.
 - Municipals - 1 trade totaling <\$1 million.
- Total trading cost equaled -0.14 bps, which is +6.40 bps lower than the EM peer group, as follows:
 - Governments at +0+20 bps versus +6.19 bps.
 - Mortgages at -1.17 bps versus +5.21 bps.
 - Corporates at +4.11 bps versus +14.47 bps

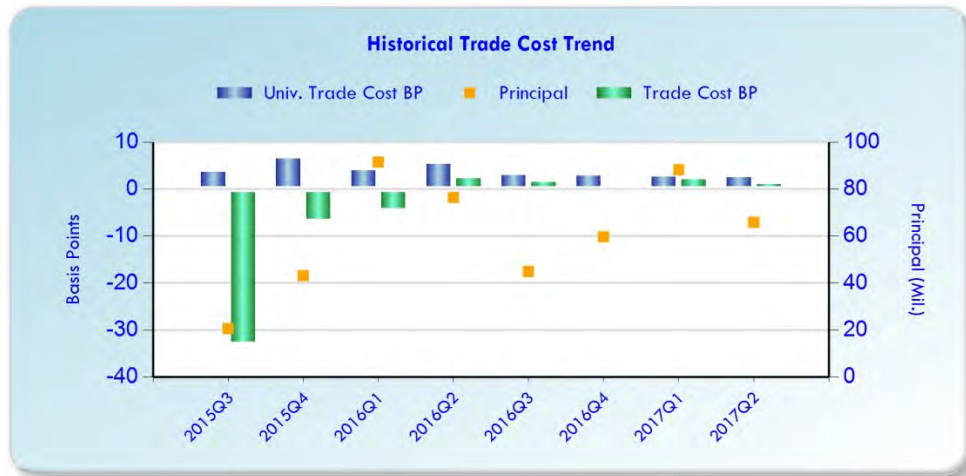
- As illustrated below, the results are consistent with previous quarters' trade costs versus the peer group.



- Comparing SCERS' U.S. Fixed Income Core Plus managers trade costs versus their peer group is as follows:
 - TCW / MetWest at -0.41 bps versus +6.11 bps.
 - NeubergerBerman at +0.75 bps versus +6.83 bps.

INTERNATIONAL FIXED INCOME

- SCERS is invested with Brandywine Global Fixed Income's commingled fund; therefore, trading activity is not tracked.
- Prudential, SCERS' Core Fixed Income manager, is permitted up to a 20% allocation in international bonds or non-U.S. denominated bonds, which is reported as follows:
 - Prudential conducted 139 international trades totaling \$65.9 million as follows:
 - Governments - 89 trades totaling \$50 million.
 - Corporates - 50 trades totaling \$16 million.
 - Total trading cost was +1.65 bps, which was +1.52 bps lower than the EM peer group cost of +3.17 bps, as follows:
 - Governments at +0.35 bps versus +3.17 bps.
 - Corporates at +5.70 bps versus +3.17 bps.
 - Trading costs are consistent with previous quarters' results, as illustrated below.



COMMISSION RECAPTURE

- SCERS’ commission recapture program, administered by State Street, instructs investment managers to trade with the program’s brokerage partners but only if the trade cost is lower and is the best execution.
- SCERS’ brokerage partners rebate back to SCERS approximately 60% of the commissions paid.
 - For the quarter ending June 30, 2017, the commission rebate totaled \$16,170.
 - For the year-to-date 2017, the commission rebate totaled \$27,641.

ATTACHMENTS

Elkins / McSherry Trading Cost Summary report for the quarter ending June 30, 2017 for U.S. equity, global equity, U.S. fixed income, and global fixed income.

Prepared by:

/s/

 JR Pearce
 Investment Officer

Reviewed by:

/s/

 Steve Davis
 Chief Investment Officer

/s/

 Annette St. Urbain
 Interim Chief Executive Officer



SACRAMENTO COUNTY

Trade Cost Summary - Global Equity Trading

Period End June 30, 2017





REPORT CONTENTS

Tab 1 : Executive Summary

- **Results / Methodology**
- **Performance vs. Universe / Trading Components**
- **Short Term Alpha**
- **Market Capitalization Performance**
- **Order Size Performance**
- **Implementation days / Liquidity By Trade Performance**
- **Country Performance**
- **High / Low Cost Managers**
- **Commission Review**

Tab 2 : Trade Detail

- **Manager Performance**
- **Broker Performance**

Tab 3 : High / Low Cost Trades

- **Trade Contributions**
- **10 High / Low Cost Trades**
- **10 High Cost Data Graphs**
- **10 Low Cost Data Graphs**



(+) = Cost

EXECUTIVE SUMMARY

Elkins/McSherry has been providing trading cost analysis to institutional investors since 1991, serving many of the world's largest investment managers, pension funds, banks, and broker dealers. Using this vast experience combined with an unmatched collection of global equity market and Universe data, Elkins/McSherry has produced a Trading Cost Analysis on behalf of SACRAMENTO COUNTY. This study evaluates global equity executions from April 1, 2017 to June 30, 2017. The analysis included trading of 23,178,030 shares representing \$199.44 million in principal across 34 countries.

Methodology :

The Elkins/McSherry analysis measures trading efficiency by quantifying the cost of brokerage commission, fees, and execution quality versus an Full Day VWAP benchmark for each of the securities traded. These data have been separated to summarize results, by Buy/Sell, Commissions, Market Impact, Short Term Alpha, Market Cap, Country, Trade Difficulty, and Highest and Lowest Cost Trades. These results are quantified in \$ and Basis Points (BP) as well as being displayed graphically to highlight the outcomes.

Results :

| BENCHMARK PERFORMANCE | | | E - Score |
|---|---|---|--|
| Commission | Fees | Full Day VWAP | |
| <ul style="list-style-type: none"> Your commission cost was +6.90 bp or \$ +\$137,519 (7.97 bp better than the Elkins/McSherry Universe) | <ul style="list-style-type: none"> Your fee cost was +4.37 bp or \$ +87,141 (0.62 bp better than the Elkins/McSherry Universe) | <ul style="list-style-type: none"> Your market impact savings was 0.43 bp or \$8,492 (8.97 bp better than the Elkins/McSherry Universe) Your overall trading cost of +10.84 bp was 17.56 bp better than the Elkins/McSherry Universe. Sacramento County trading was higher than the Elkins/McSherry Universe in 6 countries and lower than the Elkins/McSherry Universe in 28 countries. 8 of your brokers had trading cost higher than summary universe of countries (principal weighted) in which they traded. 50 of your brokers had lower trading cost. | <ul style="list-style-type: none"> E - Score : 0.03 |



(+) = Cost

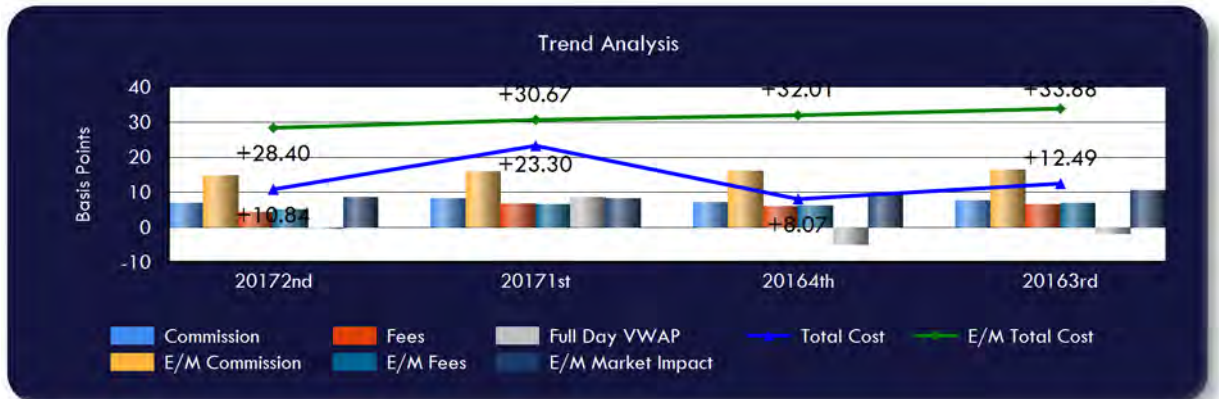
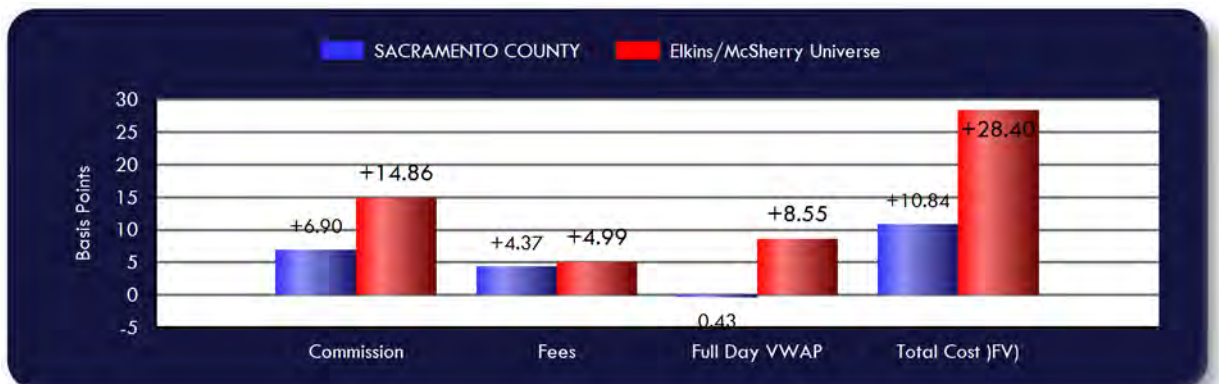
EXECUTIVE SUMMARY

TOTAL PORTFOLIO COST PERFORMANCE

| Side | COMMISSION | | | Fees | | MARKET IMPACT | | Total Cost | Total Cost/Savings Vs. Universe | E - Score |
|--------------|----------------------|------------------|----------------------|--------------|--------------|---------------|------------------------|---------------|---------------------------------|-------------|
| | Your Avg. Commission | Bundled Universe | All Trading Universe | Fees | Universe | Full Day VWAP | Universe Full Day VWAP | | Commission+Fees Full Day VWAP | |
| | (bp) | (bp) | (bp) | (bp) | (bp) | (bp) | (bp) | (bp) | (bp) | |
| Buy | +7.89 | +14.84 | +7.75 | +7.72 | +9.31 | 3.07 | +7.05 | +12.54 | 18.66 | 0.01 |
| Sell | +6.05 | +14.88 | +7.55 | +1.51 | +1.32 | +1.83 | +9.82 | +9.39 | 16.63 | 0.04 |
| Total | +6.90 | +14.86 | +7.64 | +4.37 | +4.99 | 0.43 | +8.55 | +10.84 | 17.56 | 0.03 |

TRADING COMPONENTS

| | Buys | Sells |
|----------------------------------|------------|-------------|
| Trade Principal | 91,794,047 | 107,644,898 |
| Shares | 11,640,465 | 11,537,565 |
| Unique Names | 235 | 187 |
| Liquidity (% POV) | 0.323 | 0.433 |
| Avg. Order Size | 10,778 | 12,487 |
| Avg. Order Completion Time (min) | N/A | N/A |
| Total Number of Trades | 1,080 | 924 |





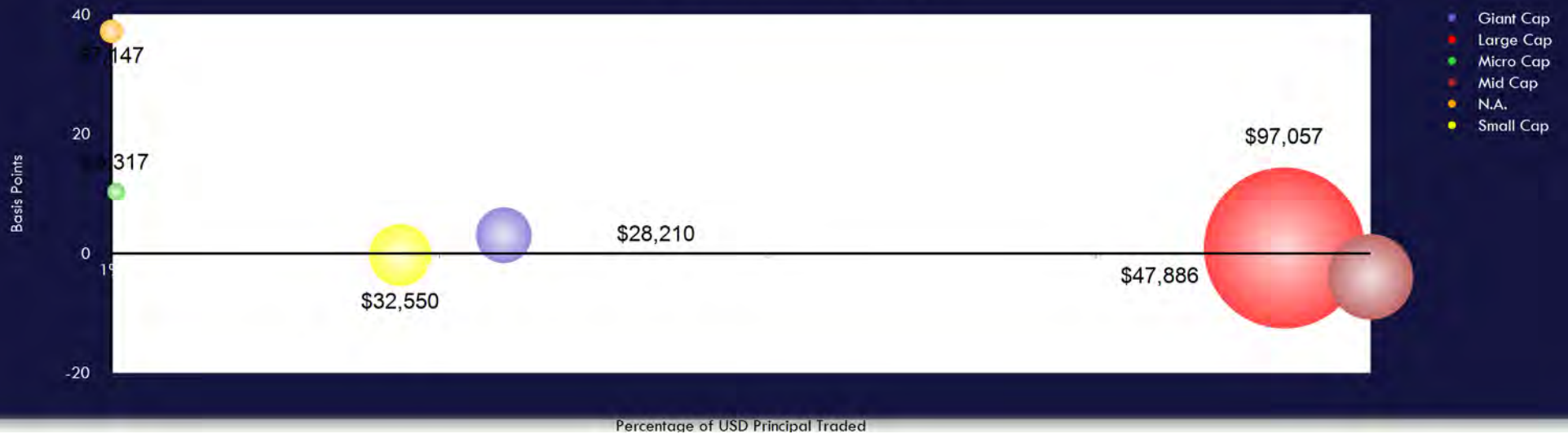
(+) = Cost

EXECUTIVE SUMMARY

MARKET CAPITALIZATION

| Market Cap | % Traded | Avg. Principal Per Order | COMMISSION | | MARKET IMPACT | | Total Cost | Total Cost/Savings | E - Score | Market Cap Definition |
|------------|----------|--------------------------|-----------------|------------------|---------------|------------------------|------------|--------------------|-----------|------------------------------|
| | | | Your Commission | Bundled Universe | Full Day VWAP | Universe Full Day VWAP | | | | |
| | (%) | (\$) | (bp) | (bp) | (bp) | (bp) | (bp) | (bp) | | |
| Mid Cap | 39.20 % | 92,307 | +7.13 | +14.91 | 3.91 | +8.37 | +6.13 | 21.33 | -0.01 | \$1 Billion to \$5 Billion |
| Large Cap | 36.57 % | 112,569 | +7.48 | +15.15 | +0.92 | +8.35 | +13.31 | 15.14 | 0.04 | \$5 Billion to \$25 Billion |
| Giant Cap | 12.79 % | 113,841 | +4.29 | +13.95 | +3.05 | +10.29 | +11.06 | 16.89 | -0.02 | Over \$25 Billion |
| Small Cap | 9.63 % | 73,310 | +7.25 | +14.95 | 0.27 | +8.06 | +16.95 | 15.07 | 0.08 | \$250 Million to \$1 Billion |
| Micro Cap | 0.97 % | 102,213 | +6.73 | +13.98 | +10.33 | +6.00 | +17.09 | 23.41 | 0.06 | Under \$250 Million |
| N.A. | 0.83 % | 415,046 | +6.00 | +14.06 | +37.19 | +7.42 | +43.19 | +21.47 | 1.54 | |

Total Cost by Market Cap: (USD)





(+) = Cost

EXECUTIVE SUMMARY

ORDER SIZE EVALUATION

| Order Size | Total # Of Orders | Avg. Principal Per Order (\$) | Avg. Order Completion Time (min) | COMMISSION | | MARKET IMPACT | | Total Cost | Total Cost/Savings | E - Score | Absolute Size (Principal) |
|---------------|-------------------|-------------------------------|----------------------------------|----------------------|-----------------------|--------------------|-----------------------------|------------|--|-----------|---------------------------|
| | | | | Your Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | (bp) | Commission+Fees +Full Day VWAP Vs. Universe (bp) | | |
| Large Orders | 2 | 1,499,929 | N/A | +9.22 | +15.11 | 2.33 | +8.54 | +6.88 | 17.36 | -0.12 | 1M or Greater |
| Medium Orders | 34 | 670,682 | N/A | +5.68 | +14.66 | 1.20 | +8.31 | +6.45 | 18.87 | -0.06 | Between 500k - 1M |
| Small Orders | 1,968 | 88,230 | N/A | +7.01 | +14.89 | 0.29 | +8.58 | +11.47 | 17.41 | 0.04 | 500K or Less |

Total Cost By Order Size: (USD)





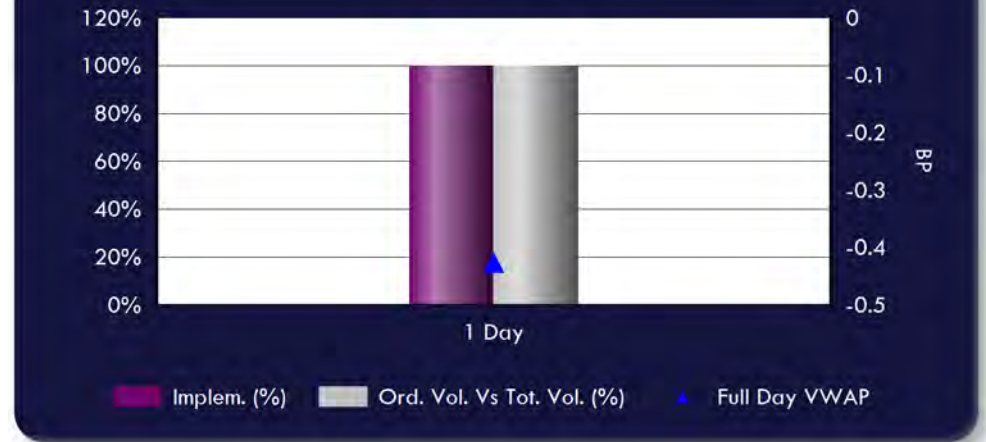
(+) = Cost

EXECUTIVE SUMMARY

IMPLEMENTATION DAYS BY TRADE

| Period | Percent Traded (%) | Order Vol. Vs Total Vol. (%) | Full Day VWAP (bp) | E - Score |
|--------|--------------------|------------------------------|--------------------|-----------|
| 1 Day | 100.00 | 100% | 0.43 | 0.03 |

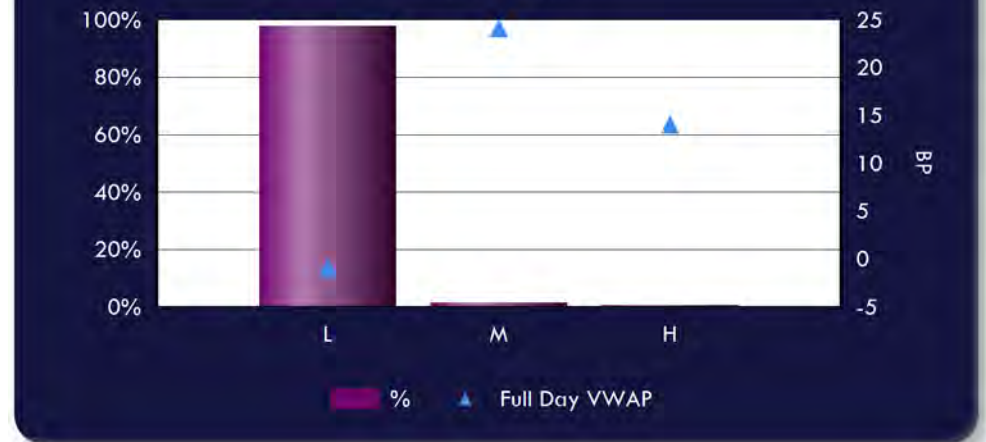
Implementation Days



TRADE DIFFICULTY

| Methodology | Liquid. Cat. | Percent Traded (%) | Full Day VWAP (bp) | E - Score |
|-----------------------|--------------|--------------------|--------------------|-----------|
| 50%+ of daily vol. | H | 1% | +14.10 | 0.33 |
| 0%~20% of daily vol. | L | 98% | 0.89 | 0.01 |
| 20%~50% of daily vol. | M | 2% | +24.17 | 1.34 |

Avg. % of Daily Volume



EXECUTIVE SUMMARY

COUNTRY PERFORMANCE

| Country | Principal (\$ Millions) | Total Principal Traded (%) | COMMISSION | | FEES | | MARKET IMPACT | | Total Cost Diff. From Universe (bp) | E - Score |
|--|----------------------------|----------------------------------|--------------------|---|--------------|-----------------------|-----------------------|-----------------------------------|--|-----------|
| | | | Commission (bp) | Bundled Universe Commission (bp) | Fees (bp) | Universe Fees (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | | |
| HIGHEST COST COUNTRIES - Total Cost Universe Difference | | | | | | | | | | |
| THAILAND | <1 | 0.23% | +11.34 | +17.51 | +0.82 | +0.99 | +52.28 | +5.63 | +40.31 | N/A |
| PHILIPPINES | <1 | 0.32% | +15.00 | +19.67 | +54.00 | +18.81 | +4.11 | +10.50 | +24.13 | 1.07 |
| MEXICO | <1 | 0.34% | +9.82 | +16.26 | +0.00 | +0.00 | +16.27 | +2.81 | +7.02 | 0.44 |
| ITALY - BUYS | 4 | 1.82% | +5.58 | +13.05 | +10.00 | +12.00 | +19.51 | +5.12 | +4.93 | 0.01 |
| FINLAND | <1 | 0.28% | +10.86 | +12.90 | +0.00 | +0.02 | +18.67 | +12.75 | +3.86 | 0.52 |
| SPAIN | 3 | 1.65% | +4.47 | +13.91 | +0.00 | +0.00 | +20.15 | +7.23 | +3.47 | 0.62 |

EXECUTIVE SUMMARY

COUNTRY PERFORMANCE

| Country | Principal (\$ Millions) | Total Principal Traded (%) | COMMISSION | | FEES | | MARKET IMPACT | | Total Cost Diff. From Universe (bp) | E - Score |
|---|----------------------------|----------------------------------|--------------------|---|--------------|-----------------------|-----------------------|-----------------------------------|--|-----------|
| | | | Commission (bp) | Bundled Universe Commission (bp) | Fees (bp) | Universe Fees (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | | |
| LOWEST COST COUNTRIES - Total Cost Universe Difference | | | | | | | | | | |
| NEW ZEALAND | <1 | 0.26% | +4.52 | +14.91 | +0.00 | +0.02 | 64.66 | +12.16 | 87.23 | -0.89 |
| U.K. - BUYS | 9 | 4.31% | +5.01 | +14.20 | +36.79 | +50.00 | 51.92 | +4.10 | 78.41 | -0.31 |
| IRELAND - BUYS | <1 | 0.11% | +9.46 | +13.78 | +100.40 | +100.00 | 41.04 | +5.55 | 50.52 | -0.52 |
| ITALY - SELLS | 3 | 1.31% | +3.11 | +13.33 | +0.00 | +0.00 | 22.34 | +14.76 | 47.33 | -0.27 |
| IRELAND - SELLS | 1 | 0.64% | +4.64 | +14.74 | +0.03 | +0.00 | +3.29 | +33.42 | 40.19 | -0.01 |
| PORTUGAL | <1 | 0.33% | +4.00 | +14.00 | +0.00 | +0.02 | 11.70 | +13.37 | 35.09 | -0.80 |
| FRANCE - BUYS | 8 | 4.08% | +5.36 | +13.86 | +26.85 | +30.00 | 15.79 | +6.17 | 33.62 | -0.45 |
| U.K. - SELLS | 10 | 5.12% | +3.75 | +14.43 | +0.10 | +0.00 | +5.35 | +26.36 | 31.58 | 0.11 |
| BELGIUM | <1 | 0.20% | +9.34 | +13.86 | +0.00 | +0.01 | 16.96 | +7.80 | 29.29 | -0.53 |
| NORWAY | 5 | 2.55% | +5.89 | +20.01 | +0.00 | +0.02 | 2.39 | +12.32 | 28.85 | -0.31 |
| DENMARK | 3 | 1.58% | +5.24 | +13.82 | +0.00 | +0.01 | 2.60 | +11.48 | 22.67 | -0.13 |
| BRAZIL | <1 | 0.39% | +11.55 | +16.06 | +3.25 | +1.79 | 5.48 | +13.89 | 22.42 | -0.14 |
| SWEDEN | 4 | 1.96% | +5.26 | +14.53 | +0.00 | +0.01 | 4.76 | +2.67 | 16.71 | -0.08 |
| SINGAPORE | 8 | 4.14% | +10.61 | +14.84 | +3.69 | +3.55 | 7.84 | +4.08 | 16.02 | -0.22 |
| ISRAEL | <1 | 0.36% | +11.09 | +20.98 | +0.00 | +0.08 | +2.35 | +7.72 | 15.34 | 0.11 |
| SOUTH AFRICA - SELLS | <1 | 0.19% | +8.00 | +14.87 | +0.28 | +0.02 | 0.77 | +7.25 | 14.63 | -0.19 |
| JAPAN | 46 | 23.03% | +7.97 | +14.96 | +0.00 | +0.01 | +3.05 | +10.65 | 14.60 | 0.11 |
| GERMANY | 3 | 1.31% | +5.18 | +14.13 | +0.00 | +0.01 | +2.50 | +7.78 | 14.25 | 0.00 |
| HONG KONG | 17 | 8.32% | +8.24 | +14.78 | +10.78 | +9.66 | 5.66 | +2.88 | 13.96 | -0.06 |
| CANADA | 12 | 6.20% | +11.10 | +16.82 | +0.00 | +0.02 | 0.14 | +7.87 | 13.75 | -0.14 |
| SWITZERLAND | 3 | 1.43% | +6.06 | +13.73 | +0.00 | +0.03 | +2.91 | +7.07 | 11.86 | -0.59 |
| AUSTRIA | <1 | 0.20% | +7.64 | +13.63 | +0.00 | +0.03 | +8.49 | +13.24 | 10.77 | 0.02 |
| FRANCE - SELLS | 8 | 4.06% | +4.63 | +13.76 | +0.00 | +0.00 | +4.98 | +6.35 | 10.50 | 0.20 |

EXECUTIVE SUMMARY

COUNTRY PERFORMANCE

| Country | Principal (\$ Millions) | Total Principal Traded (%) | COMMISSION | | FEES | | MARKET IMPACT | | Total Cost Diff. From Universe (bp) | E - Score |
|---|----------------------------|----------------------------------|--------------------|---|--------------|-----------------------|-----------------------|-----------------------------------|--|-----------|
| | | | Commission (bp) | Bundled Universe Commission (bp) | Fees (bp) | Universe Fees (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | | |
| LOWEST COST COUNTRIES - Total Cost Universe Difference | | | | | | | | | | |
| INDIA | 3 | 1.32% | +12.15 | +19.55 | +11.08 | +9.97 | +1.15 | +5.10 | 10.24 | -0.10 |
| NETHERLANDS | 6 | 3.04% | +5.38 | +14.06 | +0.00 | +0.24 | +7.15 | +7.42 | 9.20 | 0.38 |
| U.S. | 13 | 6.63% | +0.84 | +12.88 | +0.16 | +0.10 | +9.00 | +4.56 | 7.54 | 0.27 |
| AUSTRALIA | 24 | 12.15% | +8.19 | +15.21 | +0.00 | +0.96 | +8.27 | +7.18 | 6.89 | 0.18 |
| TURKEY | <1 | 0.16% | +10.00 | +15.42 | +0.00 | +0.04 | +9.09 | +8.41 | 4.78 | 0.06 |



(+) = Cost

TRADE CYCLE DETAIL

5 LOWEST COST MANAGER (Full Day VWAP)



| Manager | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|----------------------|-----------------------------------|---------------------|-------------|------------------------|-----------|--------------------|--------------------------|-----------------------|--------------------------------|---|--|-----------------|-----------------|
| | | | | | | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission +Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| S&P GLOBAL INFRAST-I | 23 | 381 | 11.49% | 60,131 | 0.28 | +1.59 | +13.95 | +7.56 | +7.25 | 12.03 | 5.15 | 22.76 | +6.25 |
| LAZARD ASSET MANAGEM | 64 | 456 | 32.06% | 140,202 | -0.04 | +8.08 | +15.09 | +0.97 | +9.15 | 15.49 | 2.60 | 17.96 | 15.96 |
| WILLIAM BLAIR & COMP | 38 | 382 | 19.15% | 99,998 | 0.04 | +7.16 | +15.18 | +0.06 | +8.06 | 17.40 | +1.61 | 17.96 | 13.85 |
| CBRE CLARION (INTL R | 49 | 472 | 24.45% | 103,332 | 0.13 | +9.18 | +14.89 | 3.44 | +7.51 | 17.69 | 11.74 | 35.90 | 33.74 |
| LSV ASSET MANAGEMENT | 26 | 313 | 12.85% | 81,868 | -0.23 | +3.95 | +14.60 | 6.03 | +10.90 | 27.70 | 22.33 | 29.17 | 36.40 |

NOTES

- Manager above made up 100.00 % of principal traded.



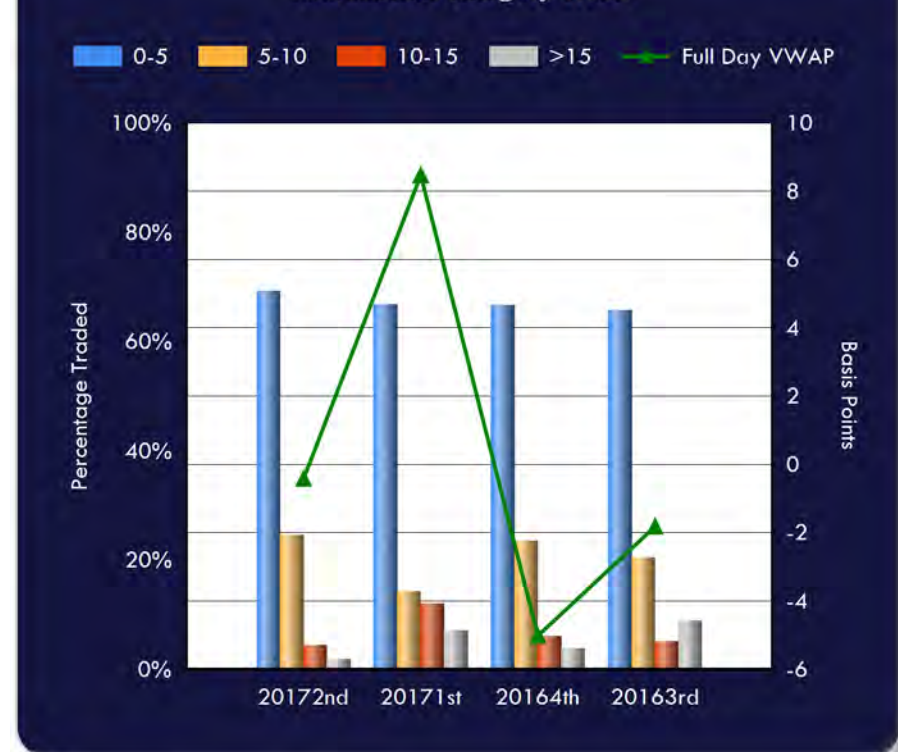
(+) = Cost

COMMISSION REVIEW

COMMISSION REVIEW - Top 20 Brokers (Commission \$)

| Broker | Total Commission | Commission (bp) | Bundled Universe (bp) | All Trading Universe (bp) | Commission Trends | | |
|------------|------------------|-----------------|-----------------------|---------------------------|-------------------|--------------|--------------|
| | | | | | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| MORGAN STA | 13,636 | +11.38 | +15.17 | +8.30 | +7.31 | +4.58 | +8.36 |
| MERRILL LY | 11,528 | +5.01 | +15.08 | +7.48 | +9.23 | +7.22 | +6.90 |
| JP MORGAN | 11,051 | +6.43 | +14.04 | +7.26 | +13.03 | +11.48 | +9.21 |
| UBS | 10,090 | +5.50 | +14.52 | +7.57 | +6.67 | +7.11 | +9.23 |
| CITIGROUP | 9,351 | +5.37 | +15.05 | +7.75 | +6.36 | +5.70 | +7.52 |
| MACQUARIE | 8,607 | +7.32 | +15.12 | +7.52 | +10.45 | +8.74 | +10.49 |
| CREDIT SUI | 8,295 | +5.63 | +14.55 | +7.60 | +9.54 | +8.14 | +7.63 |
| MIZUHO | 6,107 | +10.56 | +14.95 | +7.65 | +10.20 | +8.78 | +10.98 |
| DAIWA SECU | 5,957 | +9.75 | +15.42 | +8.40 | +11.19 | +6.58 | +11.18 |
| SMBC SECUR | 5,441 | +10.19 | +14.96 | +7.72 | +10.06 | +10.31 | +10.43 |
| CREDIT AGR | 5,331 | +9.31 | +15.47 | +7.76 | +9.90 | +11.46 | +11.52 |
| ITG | 4,569 | +6.63 | +14.71 | +7.36 | +6.35 | +4.69 | +4.95 |
| SOCIETE GE | 4,164 | +5.91 | +14.14 | +7.04 | +6.21 | +6.36 | +6.33 |
| INSTINET | 3,170 | +6.71 | +14.85 | +7.54 | +4.65 | +4.55 | +6.35 |
| RBC DOMINI | 3,050 | +14.11 | +16.82 | +10.37 | +5.59 | +3.22 | +8.41 |
| MITSUBISHI | 2,678 | +8.17 | +14.96 | +7.72 | +10.20 | +6.90 | +11.50 |
| DEUTSCHE B | 2,445 | +5.07 | +14.33 | +7.43 | +8.12 | +7.58 | +9.06 |
| GOLDMAN SA | 2,291 | +7.72 | +15.78 | +7.59 | +5.43 | +7.52 | +3.76 |
| BARCLAYS | 2,123 | +3.32 | +14.99 | +6.64 | +4.57 | +5.90 | +4.55 |
| BNP PARIBA | 1,926 | +7.22 | +15.08 | +7.67 | +7.69 | +7.75 | +7.91 |

Commission Category Trend





(+) = Cost

TRADE CYCLE DETAIL

MANAGER PERFORMANCE (FULL DAY VWAP)



| Manager | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|----------------------|-----------------------------------|---------------------|-------------|------------------------|-----------|-----------------|-----------------------|--------------------|-----------------------------|--|--|--------------|--------------|
| | | | | | | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission +Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| LAZARD ASSET MANAGEM | 64 | 456 | 32.06% | 140,202 | -0.04 | +8.08 | +15.09 | +0.97 | +9.15 | 15.49 | 2.60 | 17.96 | 15.96 |
| CBRE CLARION (INTL R | 49 | 472 | 24.45% | 103,332 | 0.13 | +9.18 | +14.89 | 3.44 | +7.50 | 17.69 | 11.74 | 35.90 | 33.74 |
| WILLIAM BLAIR & COMP | 38 | 382 | 19.15% | 99,998 | 0.04 | +7.16 | +15.18 | +0.06 | +8.06 | 17.40 | +1.61 | 17.96 | 13.85 |
| LSV ASSET MANAGEMENT | 26 | 313 | 12.85% | 81,868 | -0.23 | +3.95 | +14.60 | 6.03 | +10.90 | 27.69 | 22.33 | 29.17 | 36.40 |
| S&P GLOBAL INFRAST-I | 23 | 381 | 11.49% | 60,131 | 0.28 | +1.59 | +13.95 | +7.56 | +7.25 | 12.03 | 5.15 | 22.76 | +6.25 |

NOTES

- Manager above made up 100.00 % of principal traded.



(+) = Cost

TRADE CYCLE DETAIL

BROKER PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|--|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission +Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| MERRILL LYNCH | 23 | 167 | 11.53% | 137,714 | -0.07 | 11,528 | +5.01 | +15.08 | +2.50 | +11.41 | 19.03 | +11.10 | 8.57 | 13.23 |
| UBS | 18 | 183 | 9.20% | 100,242 | -0.16 | 10,090 | +5.50 | +14.52 | 4.63 | +8.26 | 23.30 | 13.83 | 42.07 | 14.75 |
| CITIGROUP | 17 | 152 | 8.73% | 114,576 | 0.31 | 9,351 | +5.37 | +15.05 | +7.91 | +6.49 | 8.36 | 18.31 | 20.50 | 33.50 |
| JP MORGAN CHASE | 17 | 144 | 8.62% | 119,398 | 0.20 | 11,051 | +6.43 | +14.04 | +7.20 | +6.29 | 6.94 | +1.87 | 16.29 | 35.64 |
| CREDIT SUISSE | 15 | 175 | 7.39% | 84,217 | 0.17 | 8,295 | +5.63 | +14.55 | +1.21 | +6.92 | 15.19 | 2.87 | 22.25 | 22.78 |
| MORGAN STANLEY | 12 | 163 | 6.01% | 73,542 | -0.07 | 13,636 | +11.38 | +15.17 | +3.25 | +7.28 | 7.94 | 18.27 | 20.48 | 25.86 |
| MACQUARIE | 12 | 60 | 5.90% | 195,974 | 0.10 | 8,607 | +7.32 | +15.12 | +7.03 | +7.16 | 8.45 | 18.50 | 26.85 | 26.49 |
| SOCIETE GENERALE | 7 | 73 | 3.53% | 96,522 | 0.11 | 4,164 | +5.91 | +14.14 | 4.79 | +6.76 | 25.94 | +21.34 | 15.19 | 16.23 |
| ITG | 7 | 70 | 3.46% | 98,513 | -0.19 | 4,569 | +6.63 | +14.71 | 4.66 | +10.13 | 22.92 | 16.08 | 14.27 | 19.75 |
| BARCLAYS | 6 | 58 | 3.21% | 110,426 | -0.37 | 2,123 | +3.32 | +14.99 | 8.87 | +22.43 | 42.89 | 11.72 | 33.89 | 50.72 |

NOTES

- Brokers above made up 67.58 % of principal traded.



(+) = Cost

TRADE CYCLE DETAIL

BROKER PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|---------------------|-----------------------------------|---------------------|-------------|------------------------|-----------|--------------------|--------------------|--------------------------|-----------------------|--------------------------------|---|--|-----------------|-----------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission +Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| DAIWA SECURITIES | 6 | 62 | 3.06% | 98,528 | 0.23 | 5,957 | +9.75 | +15.42 | +9.27 | +9.29 | 1.86 | 11.53 | 113.49 | 21.72 |
| MIZUHO | 6 | 31 | 2.90% | 186,515 | 0.12 | 6,107 | +10.56 | +14.95 | +2.66 | +10.06 | 11.71 | 21.24 | 19.07 | 30.13 |
| CREDIT AGRICOLE | 6 | 43 | 2.87% | 133,195 | 0.10 | 5,331 | +9.31 | +15.47 | +6.77 | +5.97 | 5.25 | 15.56 | 10.42 | 1.01 |
| SMBC SECURITIES INC | 5 | 24 | 2.68% | 222,486 | 0.19 | 5,441 | +10.19 | +14.96 | +14.03 | +10.65 | 1.40 | 16.45 | 16.41 | 11.98 |
| DEUTSCHE BANK | 5 | 60 | 2.42% | 80,452 | -0.19 | 2,445 | +5.07 | +14.33 | 5.99 | +5.80 | 21.23 | 14.04 | 16.25 | 3.80 |
| INSTINET | 5 | 99 | 2.37% | 47,696 | 0.16 | 3,170 | +6.71 | +14.85 | +3.97 | +8.61 | 12.56 | +3.84 | 28.65 | 38.96 |
| MITSUBISHI UFJ SECS | 3 | 26 | 1.64% | 126,077 | 0.20 | 2,678 | +8.17 | +14.96 | +1.85 | +10.65 | 15.60 | 13.32 | 25.68 | 27.84 |
| SC BERNSTEIN | 3 | 28 | 1.52% | 108,546 | 0.25 | 1,051 | +3.46 | +14.45 | +1.34 | +8.59 | 18.72 | 21.41 | 21.27 | 6.09 |
| GOLDMAN SACHS | 3 | 44 | 1.49% | 67,446 | -0.15 | 2,291 | +7.72 | +15.78 | 0.94 | +10.66 | 19.70 | 2.01 | 17.14 | 3.72 |
| BNP PARIBAS | 3 | 35 | 1.34% | 76,225 | -0.43 | 1,926 | +7.22 | +15.08 | 7.83 | +7.91 | 23.73 | 3.51 | +7.77 | 10.58 |

NOTES

- Brokers above made up 22.29 % of principal traded.



(+) = Cost

TRADE CYCLE DETAIL

BROKER PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|-------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|--|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission +Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| RBC DOMINION SECS | 2 | 27 | 1.08% | 80,078 | -0.06 | 3,050 | +14.11 | +16.82 | 7.94 | +7.87 | 18.54 | +6.13 | 57.15 | 22.75 |
| TD WATERHOUSE | 2 | 30 | 0.92% | 61,065 | -0.62 | 396 | +2.16 | +16.82 | 13.92 | +7.87 | 36.47 | 42.17 | 39.07 | 4.99 |
| JEFFERIES & CO | 2 | 24 | 0.90% | 74,585 | 0.68 | 749 | +4.18 | +14.25 | 172.81 | +5.08 | 201.47 | 18.35 | 9.10 | 20.11 |
| HSBC BANK | 2 | 32 | 0.84% | 52,215 | -0.62 | 736 | +4.40 | +14.25 | 56.57 | +4.99 | 71.14 | 27.07 | 56.52 | 50.87 |
| NOMURA | 2 | 6 | 0.81% | 269,338 | -0.13 | 1,559 | +9.65 | +15.36 | 29.30 | +10.17 | 44.94 | 9.54 | - | 12.58 |
| LIQUIDNET | 1 | 17 | 0.65% | 76,828 | 0.07 | 824 | +6.31 | +15.47 | +9.50 | +6.92 | 6.59 | 26.10 | 17.74 | +4.01 |
| DBS VICKERS SECS | 1 | 15 | 0.50% | 66,918 | -0.16 | 1,415 | +14.10 | +14.78 | 11.14 | +2.91 | 13.65 | 32.12 | 15.92 | 19.10 |
| WEEDEN & CO | <1 | 45 | 0.39% | 17,470 | 0.20 | 648 | +8.24 | +14.72 | +4.25 | +6.63 | 9.65 | 8.04 | 15.66 | +2.49 |
| KAS ASSOCIATE | <1 | 2 | 0.36% | 361,869 | 0.67 | 868 | +12.00 | +13.91 | +22.94 | +7.23 | +13.80 | 5.45 | - | - |
| BANCO SANTANDER | <1 | 7 | 0.34% | 97,303 | 0.01 | 760 | +11.15 | +16.11 | +0.24 | +11.04 | 14.67 | - | 28.25 | 12.73 |

NOTES

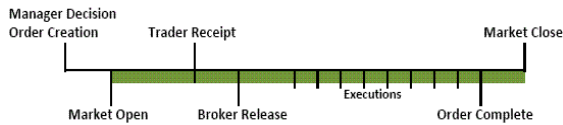
- Brokers above made up 6.81 % of principal traded.



(+) = Cost

TRADE CYCLE DETAIL

BROKER PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|----------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|--|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission +Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| EXANE | <1 | 4 | 0.33% | 167,023 | -0.41 | 303 | +4.54 | +13.81 | 6.21 | +7.07 | 22.54 | 27.47 | 32.78 | 25.60 |
| NESBITT BURNS | <1 | 6 | 0.32% | 106,431 | -0.36 | 441 | +6.91 | +16.82 | 7.46 | +7.87 | 25.26 | +56.79 | - | +3.27 |
| D CARNEGIE AG | <1 | 2 | 0.29% | 293,841 | -0.10 | 353 | +6.00 | +13.82 | 3.45 | +11.48 | 22.76 | +18.05 | +14.18 | - |
| INVESTEC BANK | <1 | 5 | 0.26% | 103,816 | -0.10 | 616 | +11.87 | +14.20 | +31.71 | +4.10 | 14.12 | 0.26 | 6.99 | - |
| JOH BERENBERG GOSSLE | <1 | 3 | 0.18% | 122,197 | -0.69 | 458 | +12.48 | +14.15 | 5.29 | +6.75 | 13.71 | +36.20 | 59.30 | 9.95 |
| CARNEGIE | <1 | 2 | 0.17% | 172,216 | 0.35 | 517 | +15.00 | +12.90 | +14.49 | +12.75 | +3.82 | 10.09 | 17.04 | 15.43 |
| MAINFIRSTBANK | <1 | 7 | 0.17% | 48,023 | 0.11 | 269 | +8.00 | +13.63 | +10.73 | +13.24 | 8.17 | - | +26.00 | - |
| RAYMOND JAMES | <1 | 4 | 0.16% | 79,652 | 0.27 | 446 | +14.01 | +16.82 | +9.30 | +7.87 | 1.40 | - | - | - |
| ABG SECURITIES | <1 | 7 | 0.15% | 42,036 | -0.38 | 390 | +13.24 | +17.74 | 13.50 | +8.32 | 26.33 | - | - | - |
| EVANS & PARTNERS | <1 | 2 | 0.14% | 139,320 | 0.44 | 557 | +20.00 | +15.21 | +19.51 | +7.18 | +16.16 | - | - | - |

NOTES

- Brokers above made up 2.18 % of principal traded.



(+) = Cost

TRADE CYCLE DETAIL

BROKER PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|----------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|--|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission +Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| ODDO SECS | <1 | 1 | 0.14% | 276,526 | -1.00 | 387 | +14.00 | +13.86 | 35.30 | +6.17 | 41.33 | - | - | - |
| CHINA INTL CAP CORP | <1 | 2 | 0.13% | 127,965 | 0.36 | 512 | +20.00 | +14.78 | +11.31 | +2.88 | +14.76 | - | - | - |
| PAVILION GLOBAL MKT | <1 | 5 | 0.13% | 50,988 | -0.28 | 76 | +3.00 | +16.82 | 20.09 | +7.87 | 41.80 | 44.18 | 15.67 | 41.70 |
| SCOTIA CAPITAL | <1 | 12 | 0.12% | 19,744 | -1.28 | 42 | +1.76 | +16.82 | 39.47 | +7.87 | 62.42 | 20.88 | 68.99 | +20.79 |
| INVESTEC SECURITIES | <1 | 2 | 0.10% | 103,169 | -0.40 | 165 | +8.00 | +14.87 | 19.35 | +7.25 | 32.98 | - | - | 13.53 |
| BAADER WERTPAPIERHAN | <1 | 7 | 0.10% | 27,915 | -0.54 | 293 | +15.00 | +13.73 | 11.57 | +7.07 | 17.40 | - | - | - |
| LIBERUM CAPITAL LTD | <1 | 2 | 0.10% | 95,735 | N/A | 153 | +8.00 | +14.20 | 44.05 | +4.10 | 104.22 | 12.28 | - | 66.79 |
| GOODBODY STOCKBROKER | <1 | 3 | 0.06% | 38,943 | 1.41 | 111 | +9.54 | +14.35 | +0.10 | +12.19 | 52.81 | 27.61 | +20.86 | - |
| GREEN STREET | <1 | 6 | 0.05% | 17,946 | 0.41 | 129 | +12.00 | +13.78 | +23.19 | +5.55 | +16.39 | +14.64 | 32.61 | 66.13 |
| KIM ENG SECS | <1 | 1 | 0.05% | 101,634 | -0.93 | 81 | +8.00 | +14.78 | 1.19 | +2.88 | 9.74 | - | 36.64 | - |

NOTES

- Brokers above made up 0.97 % of principal traded.



(+) = Cost

TRADE CYCLE DETAIL

BROKER PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|----------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|--|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission +Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| EDELWEISS SECURITIES | <1 | 1 | 0.05% | 89,895 | 0.06 | 180 | +20.00 | +19.55 | +10.60 | +5.10 | +8.98 | - | - | - |
| KOTAK SECURITIES | <1 | 1 | 0.03% | 66,601 | -0.11 | 80 | +12.00 | +19.55 | 12.47 | +5.10 | 23.29 | - | - | - |
| REDBURN PARTNERS LLP | <1 | 1 | 0.02% | 41,166 | N/A | 16 | +4.00 | +14.20 | +39.34 | +4.10 | +25.36 | 25.98 | - | 17.84 |
| KNIGHT CAPITAL | <1 | 12 | 0.02% | 2,533 | -0.59 | 9 | +2.80 | +13.57 | 18.70 | +5.72 | 35.58 | - | - | - |
| CANACCORD ADAMS | <1 | 1 | 0.01% | 29,565 | 0.43 | 57 | +19.21 | +16.82 | +9.15 | +7.87 | +3.64 | 8.19 | 15.28 | - |
| DAVY STOCKBROKERS | <1 | 1 | 0.01% | 27,547 | -1.11 | 33 | +12.00 | +13.78 | 13.90 | +5.55 | 20.72 | +51.57 | - | 31.49 |
| ABN AMRO | <1 | 1 | 0.01% | 26,443 | -0.19 | 32 | +12.00 | +14.06 | 9.51 | +7.42 | 19.23 | - | 42.34 | 34.43 |
| AUTREPAT-STK | <1 | 1 | 0.01% | 18,179 | N/A | 0 | +0.00 | +14.91 | 132.32 | +12.16 | 159.41 | 6.53 | +94.15 | 400.13 |

NOTES

- Brokers above made up 0.17 % of principal traded.



(+) = Cost

TRADE CYCLE DETAIL

CBRE CLARION (INTL RE) PERFORMANCE (FULL DAY VWAP)



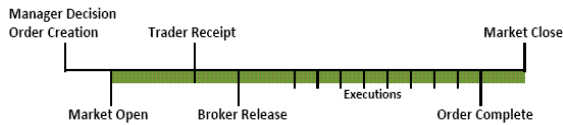
| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|---------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|---|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission + Fees + Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| GRAND TOTAL | 49 | 472 | 24.45% | 103,332 | 0.13 | 44,749 | +9.18 | +14.89 | 3.44 | +7.50 | 17.69 | 11.74 | 35.90 | 33.74 |
| JP MORGAN CHASE | 6 | 55 | 3.19% | 115,600 | 0.07 | 7,598 | +11.95 | +14.86 | +3.06 | +6.81 | 6.73 | 1.48 | 20.77 | 36.17 |
| MACQUARIE | 4 | 30 | 2.20% | 146,526 | 0.31 | 3,178 | +7.23 | +15.08 | +19.03 | +6.78 | +4.02 | 24.93 | 31.63 | 33.71 |
| CITIGROUP | 4 | 33 | 2.17% | 130,999 | 0.31 | 3,935 | +9.10 | +14.95 | +6.33 | +6.04 | 5.39 | 17.41 | 33.19 | 57.30 |
| UBS | 4 | 50 | 2.13% | 85,085 | -0.61 | 2,665 | +6.26 | +14.63 | 19.14 | +9.04 | 42.30 | 24.50 | 23.16 | 43.57 |
| MORGAN STANLEY | 4 | 55 | 1.92% | 69,461 | -0.03 | 3,131 | +8.20 | +14.53 | 2.44 | +5.30 | 14.02 | 15.69 | 31.89 | 14.00 |
| DAIWA SECURITIES | 4 | 40 | 1.83% | 91,408 | 0.25 | 3,656 | +10.00 | +14.91 | +15.09 | +8.41 | +2.09 | 11.99 | 146.02 | 22.78 |
| CREDIT AGRICOLE | 3 | 22 | 1.65% | 149,457 | 0.21 | 3,288 | +10.00 | +14.99 | +6.71 | +5.19 | 3.49 | 21.82 | 15.53 | 22.39 |
| MERRILL LYNCH | 3 | 23 | 1.54% | 133,791 | -0.29 | 2,386 | +7.75 | +14.95 | 11.93 | +8.74 | 28.06 | 16.04 | 14.59 | 27.41 |
| INSTINET | 3 | 26 | 1.32% | 100,873 | 0.33 | 2,274 | +8.67 | +14.92 | +9.57 | +9.02 | 5.48 | +6.92 | 20.82 | 33.30 |
| SMBC SECURITIES INC | 2 | 9 | 1.21% | 268,427 | 0.40 | 2,416 | +10.00 | +14.96 | +30.94 | +10.65 | +15.32 | 17.05 | 16.18 | 9.35 |



(+) = Cost

TRADE CYCLE DETAIL

LAZARD ASSET MANAGEMENT PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|--------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|---|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission+Fees+Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| GRAND TOTAL | 64 | 456 | 32.06% | 140,202 | -0.04 | 51,644 | +8.08 | +15.09 | +0.97 | +9.15 | 15.49 | 2.60 | 17.96 | 15.96 |
| MERRILL LYNCH | 13 | 97 | 6.76% | 138,922 | -0.11 | 7,020 | +5.21 | +15.49 | +2.38 | +12.59 | 20.64 | +14.48 | +12.99 | 20.13 |
| CREDIT SUISSE | 6 | 62 | 3.11% | 99,934 | -0.27 | 3,037 | +4.90 | +14.23 | 13.73 | +5.56 | 29.99 | +20.08 | 20.99 | +4.45 |
| MORGAN STANLEY | 6 | 62 | 2.98% | 95,872 | 0.03 | 9,082 | +15.28 | +15.78 | +11.89 | +7.96 | +3.34 | 24.91 | 12.05 | 34.95 |
| JP MORGAN CHASE | 4 | 19 | 2.24% | 235,512 | 0.63 | 2,930 | +6.55 | +14.39 | +13.32 | +7.81 | 2.47 | +20.18 | 16.31 | 32.52 |
| MACQUARIE | 4 | 18 | 2.20% | 243,611 | 0.18 | 3,807 | +8.68 | +15.15 | +5.64 | +8.10 | 9.64 | 9.47 | 9.73 | 11.05 |
| ITG | 4 | 31 | 2.09% | 134,691 | -0.41 | 3,191 | +7.64 | +14.81 | 10.32 | +10.60 | 28.23 | 20.72 | +70.23 | 79.57 |
| UBS | 3 | 15 | 1.58% | 210,737 | 0.02 | 2,087 | +6.60 | +14.28 | +10.73 | +8.61 | 6.07 | 16.71 | 67.09 | +8.60 |
| SOCIETE GENERALE | 3 | 25 | 1.49% | 118,813 | 0.31 | 2,079 | +7.00 | +14.17 | +12.11 | +8.08 | 3.22 | 8.32 | 3.65 | 24.30 |
| CITIGROUP | 3 | 26 | 1.39% | 106,875 | 0.09 | 1,813 | +6.52 | +15.06 | +3.54 | +8.51 | 13.85 | 24.24 | 6.50 | 20.66 |
| MIZUHO | 3 | 9 | 1.39% | 308,110 | 0.00 | 3,252 | +11.73 | +14.96 | 0.77 | +10.65 | 14.67 | 53.43 | 23.82 | - |



(+) = Cost

TRADE CYCLE DETAIL

LSV ASSET MANAGEMENT PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|--------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|---|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission + Fees + Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| GRAND TOTAL | 26 | 313 | 12.85% | 81,868 | -0.23 | 10,114 | +3.95 | +14.60 | 6.03 | +10.90 | 27.69 | 22.33 | 29.17 | 36.40 |
| BARCLAYS | 6 | 54 | 2.88% | 106,186 | -0.31 | 1,720 | +3.00 | +14.40 | 8.03 | +23.62 | 42.96 | 24.52 | 38.44 | 58.81 |
| UBS | 5 | 41 | 2.71% | 131,835 | -0.24 | 2,703 | +5.00 | +14.08 | 12.65 | +7.04 | 28.86 | 13.80 | 21.48 | 27.82 |
| CITIGROUP | 5 | 34 | 2.27% | 132,983 | 0.09 | 1,809 | +4.00 | +15.08 | +4.92 | +6.35 | 12.93 | 26.46 | 31.09 | 33.14 |
| TD WATERHOUSE | 2 | 30 | 0.92% | 61,065 | -0.62 | 396 | +2.16 | +16.82 | 13.92 | +7.87 | 36.47 | 46.70 | 39.07 | 25.19 |
| HSBC BANK | 2 | 31 | 0.78% | 50,460 | -0.62 | 469 | +3.00 | +14.21 | 23.05 | +5.15 | 39.20 | 27.77 | 57.68 | 58.42 |
| CREDIT SUISSE | 1 | 24 | 0.74% | 61,468 | -0.11 | 735 | +4.98 | +14.55 | 3.02 | +6.89 | 19.22 | 16.87 | 18.22 | 24.59 |
| MORGAN STANLEY | 1 | 33 | 0.65% | 39,410 | -0.66 | 522 | +4.01 | +13.48 | 18.30 | +8.72 | 37.62 | 27.27 | 36.88 | 43.49 |
| SOCIETE GENERALE | 1 | 12 | 0.54% | 89,285 | 0.20 | 566 | +5.28 | +13.88 | +10.68 | +6.03 | 3.94 | 18.02 | 28.64 | 10.81 |
| ITG | <1 | 14 | 0.41% | 58,683 | 0.00 | 363 | +4.42 | +14.22 | +1.77 | +11.58 | 19.53 | 8.67 | 10.23 | 40.81 |
| INSTINET | <1 | 9 | 0.30% | 66,112 | -0.13 | 184 | +3.09 | +15.12 | 5.88 | +10.41 | 28.33 | 31.33 | 30.88 | 30.73 |



(+) = Cost

TRADE CYCLE DETAIL

S&P GLOBAL INFRAS-T-INDEX PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|--------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|---|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission + Fees + Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| GRAND TOTAL | 23 | 381 | 11.49% | 60,131 | 0.28 | 3,644 | +1.59 | +13.95 | +7.56 | +7.25 | 12.03 | 5.15 | 22.76 | +6.25 |
| JP MORGAN CHASE | 6 | 66 | 3.07% | 92,720 | 0.02 | 320 | +0.52 | +12.90 | +6.76 | +4.58 | 10.11 | 9.03 | +7.95 | 3.08 |
| MERRILL LYNCH | 5 | 32 | 2.66% | 165,814 | 0.11 | 1,265 | +2.38 | +14.02 | 0.14 | +10.74 | 22.31 | 1.08 | 37.24 | +3.64 |
| CITIGROUP | 4 | 45 | 2.23% | 98,854 | 0.77 | 396 | +0.89 | +14.23 | +14.24 | +5.69 | 4.72 | 14.94 | 7.54 | 37.75 |
| CREDIT SUISSE | 3 | 54 | 1.27% | 47,065 | 0.89 | 571 | +2.25 | +14.07 | +28.56 | +9.10 | +7.89 | 21.39 | 7.77 | 12.47 |
| MACQUARIE | 2 | 5 | 0.77% | 306,480 | -0.72 | 460 | +3.00 | +15.16 | 23.89 | +7.98 | 44.84 | 62.11 | 41.71 | 3.03 |
| RBC DOMINION SECS | <1 | 7 | 0.32% | 92,193 | -0.07 | 107 | +1.67 | +16.82 | 1.17 | +7.87 | 24.21 | - | - | - |
| UBS | <1 | 32 | 0.32% | 19,882 | 0.30 | 117 | +1.84 | +13.93 | +3.85 | +6.70 | 15.05 | 31.28 | 4.56 | 49.05 |
| DEUTSCHE BANK | <1 | 4 | 0.28% | 138,681 | 0.99 | 166 | +3.00 | +15.21 | +32.23 | +7.18 | +11.88 | 18.76 | 62.50 | 14.96 |
| JEFFERIES & CO | <1 | 19 | 0.24% | 25,429 | 1.20 | 121 | +2.50 | +13.75 | +42.16 | +6.03 | +24.46 | - | - | - |
| INSTINET | <1 | 48 | 0.09% | 3,846 | 0.11 | 53 | +2.88 | +14.15 | 4.36 | +7.13 | 22.92 | +19.30 | 23.59 | 100.07 |



(+) = Cost

TRADE CYCLE DETAIL

WILLIAM BLAIR & COMPANY PERFORMANCE (FULL DAY VWAP)



| Broker | Principal Traded (\$ Millions) | Total Orders Traded | % Principal | Avg. Principal (\$) | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | Commission+Fees+Full Day VWAP Vs. Universe TREND | | |
|---------------------|-----------------------------------|---------------------|-------------|---------------------|-----------|-----------------|-----------------|-----------------------|--------------------|-----------------------------|---|--|--------------|--------------|
| | | | | | | Commission (\$) | Commission (bp) | Bundled Universe (bp) | Full Day VWAP (bp) | Universe Full Day VWAP (bp) | Commission + Fees + Full Day VWAP Vs. Universe (bp) | 20171st (bp) | 20164th (bp) | 20163rd (bp) |
| GRAND TOTAL | 38 | 382 | 19.15% | 99,998 | 0.04 | 27,367 | +7.16 | +15.18 | +0.06 | +8.06 | 17.40 | +1.61 | 17.96 | 13.85 |
| UBS | 5 | 45 | 2.45% | 108,612 | 0.16 | 2,518 | +5.15 | +15.16 | +5.88 | +8.92 | 12.80 | 3.72 | 11.53 | 2.43 |
| SC BERNSTEIN | 3 | 28 | 1.52% | 108,546 | 0.25 | 1,051 | +3.46 | +14.45 | +1.34 | +8.59 | 18.72 | 20.09 | 21.27 | 6.09 |
| SOCIETE GENERALE | 3 | 36 | 1.51% | 83,455 | -0.31 | 1,518 | +5.05 | +14.19 | 26.93 | +5.71 | 56.17 | +79.29 | 19.30 | 11.35 |
| CREDIT SUISSE | 3 | 27 | 1.50% | 111,121 | 0.37 | 1,706 | +5.69 | +15.36 | +14.54 | +8.30 | 3.32 | 7.54 | 40.04 | 19.33 |
| ITG | 2 | 19 | 0.94% | 99,014 | 0.28 | 1,012 | +5.38 | +14.69 | +4.26 | +8.48 | 13.42 | 13.30 | 18.99 | 32.46 |
| DAIWA SECURITIES | 2 | 14 | 0.94% | 133,446 | 0.25 | 1,690 | +9.05 | +16.55 | 0.15 | +10.60 | 6.36 | 8.26 | 18.91 | 20.36 |
| BNP PARIBAS | 2 | 24 | 0.90% | 74,380 | -0.75 | 1,221 | +6.84 | +14.90 | 32.93 | +7.68 | 48.57 | 1.17 | 6.69 | 25.06 |
| CREDIT AGRICOLE | 2 | 15 | 0.88% | 116,349 | 0.13 | 1,487 | +8.52 | +16.53 | +13.69 | +6.24 | +0.03 | 4.72 | +19.91 | +3.70 |
| MITSUBISHI UFJ SECS | 2 | 13 | 0.75% | 115,457 | 0.03 | 901 | +6.00 | +14.96 | +0.18 | +10.65 | 19.44 | 11.02 | 20.33 | 20.74 |
| MACQUARIE | 1 | 7 | 0.72% | 206,468 | 0.08 | 1,162 | +8.04 | +15.14 | +7.52 | +4.61 | 4.16 | +13.61 | 6.29 | 7.82 |



(+) = Cost

TRADE DETAIL ANALYSIS

Largest Principal Volume Traded

| | | | | | | | Market Impact |
|--------------------------------|----------|---------|--------------------|----------------|-------------|-----------|--------------------|
| Name | # Orders | Shares | Net Principal (\$) | Principal (\$) | % of Volume | E - Score | Full Day VWAP (bp) |
| TELENOR ASA COMMON STOCK NOK6. | 26 | 294,080 | 4,722,648 | 4,722,648 | 1.05% | -0.31 | 1.93 |
| HSBC HOLDINGS PLC COMMON STOCK | 24 | 534,700 | 4,680,496 | 4,680,496 | 0.12% | -0.29 | 6.89 |
| AMCOR LIMITED COMMON STOCK | 20 | 398,843 | 4,531,775 | 4,531,775 | 0.73% | -0.01 | +3.35 |
| KAO CORP COMMON STOCK | 18 | 74,400 | -4,451,422 | 4,451,422 | 0.18% | 0.08 | 2.76 |
| ILIAD SA COMMON STOCK | 29 | 17,017 | 4,141,919 | 4,141,919 | 0.79% | -0.13 | 4.59 |
| CAE INC COMMON STOCK | 54 | 219,670 | -3,554,448 | 3,554,448 | 0.81% | -0.16 | 1.44 |
| UBISOFT ENTERTAINMENT COMMON S | 32 | 76,419 | -3,460,441 | 3,460,441 | 1.43% | -0.21 | 8.15 |
| MITSUBISHI ESTATE CO LTD COMMO | 21 | 166,200 | -2,330,575 | 3,199,206 | 0.15% | 0.20 | +0.06 |
| ABN AMRO GROUP NV CVA DUTCH CE | 7 | 117,300 | -3,192,113 | 3,192,113 | 0.88% | -0.10 | 11.09 |
| NIPPON BUILDING FUND INC REIT | 20 | 577 | -3,091,620 | 3,091,620 | 0.76% | 0.53 | +16.09 |

Names Most Traded - Total Orders (\$)

| | | | | | | | Market Impact |
|--------------------------------|----------|-----------|--------------------|-----------------|-------------|-----------|--------------------|
| Name | # Orders | Shares | Net Principal (\$) | Commission (bp) | % of Volume | E - Score | Full Day VWAP (bp) |
| CAE INC COMMON STOCK | 54 | 219,670 | -3,554,448 | +5.84 | 0.81% | -0.16 | 1.44 |
| CALTEX AUSTRALIA LTD COMMON ST | 34 | 131,232 | 3,064,815 | +8.92 | 0.40% | 0.02 | +1.16 |
| LEGAL + GENERAL GROUP PLC COMM | 34 | 599,600 | -1,966,022 | +3.21 | 0.20% | -0.39 | 12.10 |
| INDIVIOR PLC COMMON STOCK USD. | 32 | 152,300 | 641,749 | +3.34 | 0.35% | N/A | 21.85 |
| UBISOFT ENTERTAINMENT COMMON S | 32 | 76,419 | -3,460,441 | +6.73 | 1.43% | -0.21 | 8.15 |
| CANFOR CORP COMMON STOCK | 31 | 84,400 | -1,193,008 | +4.25 | 1.85% | -0.42 | 15.88 |
| BOMBARDIER INC B COMMON STOCK | 31 | 1,081,700 | -1,986,028 | +48.75 | 0.44% | -0.13 | +20.60 |
| BUCHER INDUSTRIES AG REG COMMO | 29 | 1,730 | 547,233 | +4.95 | 0.38% | -0.40 | 17.31 |
| ENEL SPA COMMON STOCK EUR1. | 29 | 239,010 | -420,784 | +3.39 | 0.03% | -0.86 | 25.93 |
| ILIAD SA COMMON STOCK | 29 | 17,017 | 4,141,919 | +5.09 | 0.79% | -0.13 | 4.59 |



(+) = Cost

TRADE CONTRIBUTIONS

| Cost/Savings Performance | | | | |
|--------------------------|---------------|-------------|-------------------------|--------------------------------|
| Category | Principal USD | # of Trades | Avg. Market Impact (bp) | Percentage of all Cost/Savings |
| 10 High Cost Trades | 4,989,737 | 10 | +167.53 | 19.91% |
| Cost Trades | 104,943,745 | 957 | +25.42 | 100.00% |
| Saving Trades | 94,396,278 | 1,045 | 25.87 | 100.00% |
| 10 Low Cost Trades | 5,064,362 | 10 | 195.72 | 30.30% |





(+) = Cost

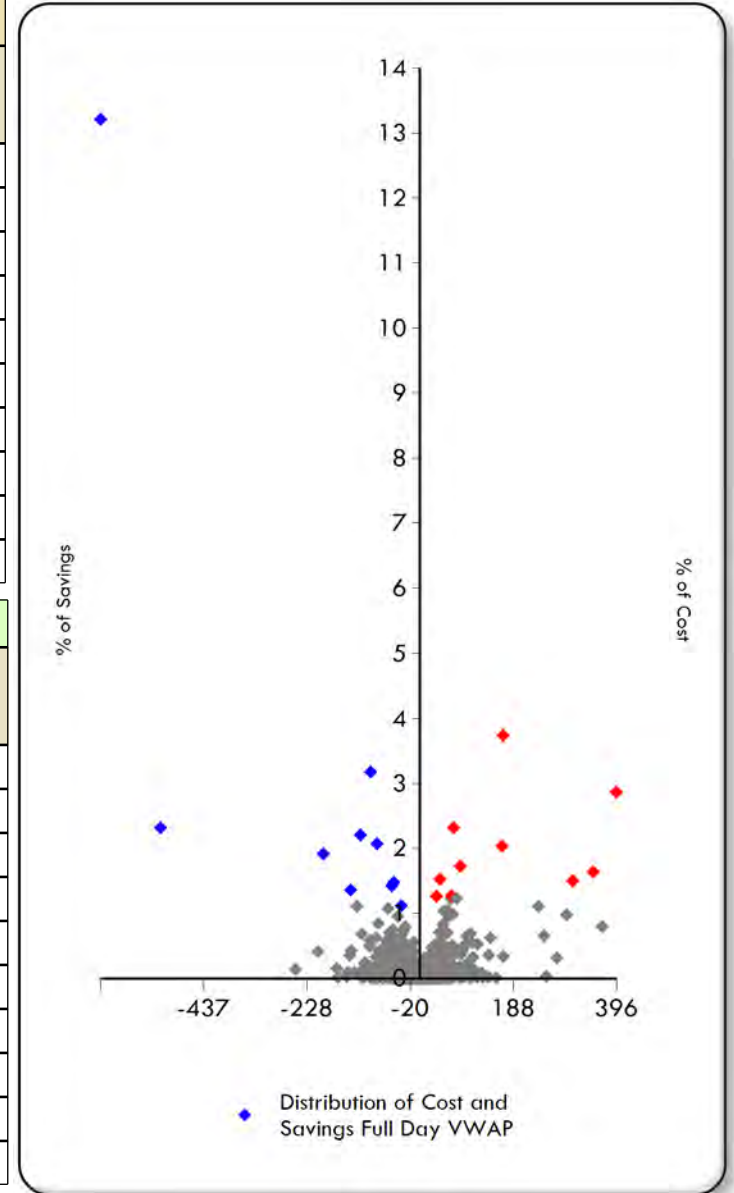
TRADE LEVEL DETAILS

10 High Cost Trades (Full Day VWAP)

| Side | Country | Security | Trade Date | Principal (\$) | Cost (%) | E - Score | Full Day VWAP (bp) | Manager | Exbroker |
|------|---------|------------|------------|----------------|----------|-----------|--------------------|---------|----------|
| Buy | AST | DEXUS REIT | 20170622 | 555,994 | 3.74% | 2.56 | +167.90 | CBRE | MACQU |
| Buy | CAN | BOMBARDIER | 20170609 | 184,649 | 2.87% | 0.80 | +396.49 | LAZAR | MORGA |
| Buy | ITA | UNICREDIT | 20170419 | 844,637 | 2.32% | 0.55 | +67.89 | LAZAR | UBS |
| Buy | SWI | KARDEX AG | 20170606 | 306,972 | 2.04% | N/A | +165.68 | WILLI | MERRI |
| Sell | SPA | ABERTIS IN | 20170419 | 517,196 | 1.73% | 0.72 | +81.36 | S&P G | MERRI |
| Sell | AST | PRIMARY HE | 20170508 | 111,066 | 1.64% | 2.27 | +349.82 | LSV A | BNP P |
| Buy | JAP | MITSUI FUD | 20170502 | 926,985 | 1.53% | 0.75 | +40.60 | CBRE | SMBC |
| Buy | UK | FEVERTREE | 20170525 | 123,243 | 1.50% | N/A | +308.38 | WILLI | INVES |
| Sell | NOR | TELENOR AS | 20170504 | 488,478 | 1.27% | 0.58 | +63.65 | LAZAR | MERRI |
| Buy | NTH | COCA COLA | 20170505 | 930,517 | 1.27% | 0.79 | +33.55 | LAZAR | JP MO |

10 Low Cost Trades (Full Day VWAP)

| Side | Country | Security | Trade Date | Principal (\$) | Savings (%) | E - Score | Full Day VWAP (bp) | Manager | Exbroker |
|------|---------|------------|------------|----------------|-------------|-----------|--------------------|---------|----------|
| Buy | UK | TRITAX BIG | 20170511 | 486,903 | 13.21% | N/A | 644.79 | CBRE | JEFFE |
| Buy | FRA | AROUNDTOWN | 20170510 | 803,545 | 3.18% | -3.07 | 99.47 | CBRE | UBS |
| Buy | HKG | ASM PACIFI | 20170425 | 106,616 | 2.32% | N/A | 523.55 | WILLI | HSBC |
| Buy | SGP | SATS LTD C | 20170519 | 461,801 | 2.21% | -2.52 | 120.02 | WILLI | BNP P |
| Sell | ITA | ATLANTIA S | 20170419 | 611,891 | 2.07% | -1.28 | 86.77 | S&P G | MERRI |
| Buy | JAP | KENEDIX RE | 20170411 | 244,626 | 1.92% | N/A | 195.23 | CBRE | NOMUR |
| Buy | NTH | ABN AMRO G | 20170509 | 706,445 | 1.48% | -0.81 | 52.88 | LSV A | UBS |
| Sell | SPA | AENA SA CO | 20170419 | 640,096 | 1.43% | -0.71 | 56.91 | S&P G | MERRI |
| Sell | NZL | AUCKLAND I | 20170419 | 250,561 | 1.36% | -2.86 | 139.92 | S&P G | MACQU |
| Buy | NTH | ABN AMRO G | 20170508 | 751,877 | 1.12% | -0.44 | 37.64 | LSV A | UBS |



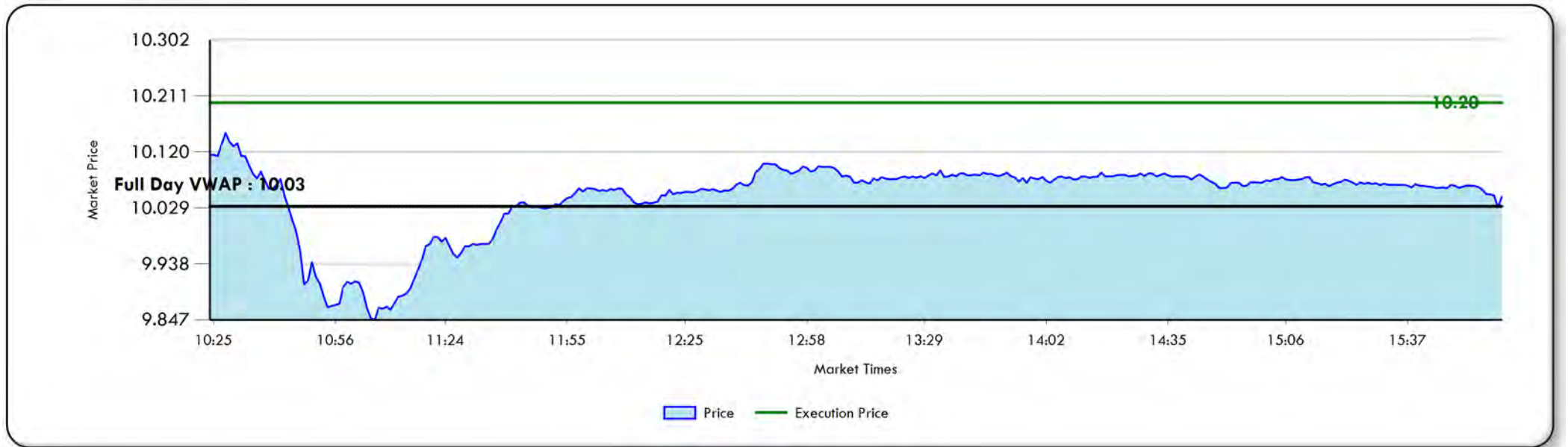


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

DEXUS REIT - 20170622

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|------------------------|-----------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | CBRE CLARION (INTL RE) | MACQUARIE | AST | AUD | B033YN6 | 06/22/2017 10:00:00 | 06/22/2017 16:12:00 | 555,994 | 10.20 | 10.03 | +9,181 | +167.89 | 2.56 | 0.77 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 3.74% of your market impact cost.

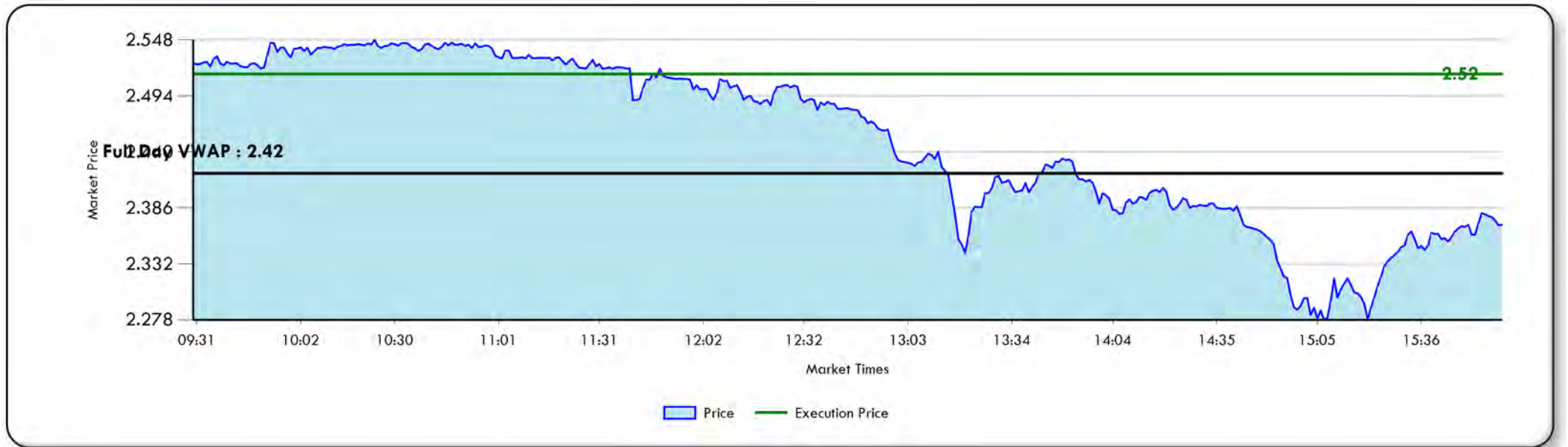


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

BOMBARDIER INC B COMMON STOCK - 20170609

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|-------------------------|----------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | LAZARD ASSET MANAGEMENT | MORGAN STANLEY | CAN | CAD | 2109723 | 06/09/2017 09:30:00 | 06/09/2017 16:00:00 | 184,649 | 2.52 | 2.42 | +7,042 | +396.48 | 0.80 | 0.46 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 2.87% of your market impact cost.

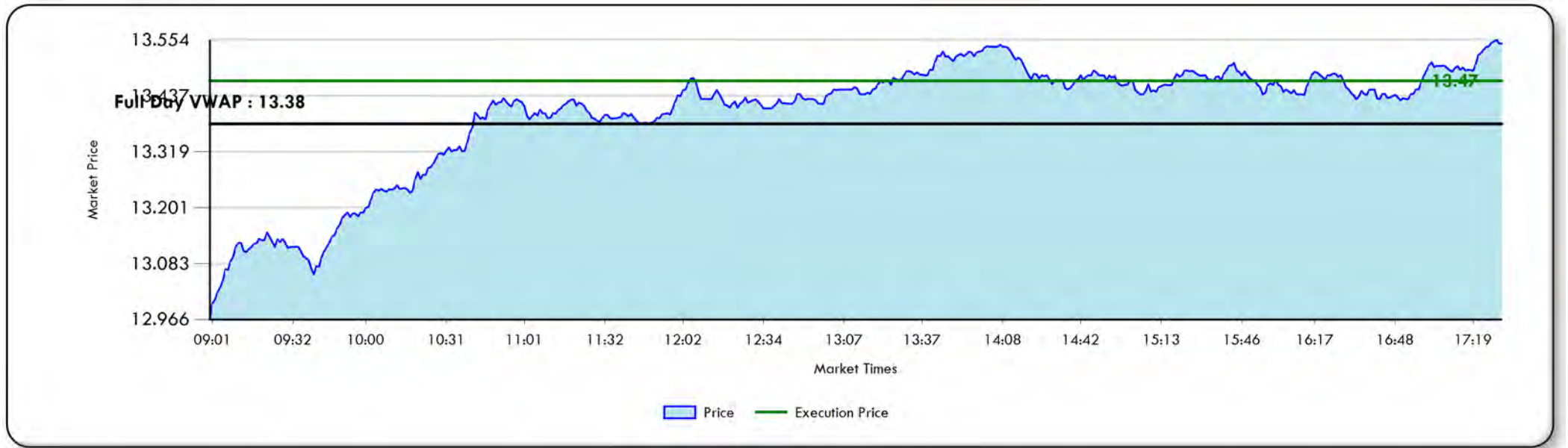


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

UNICREDIT SPA COMMON STOCK - 20170419

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|-------------------------|--------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | LAZARD ASSET MANAGEMENT | UBS | ITA | EUR | BYMXPS7 | 04/19/2017 09:00:00 | 04/19/2017 17:30:00 | 844,637 | 13.47 | 13.38 | +5,696 | +67.89 | 0.55 | 0.27 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 2.32% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

KARDEX AG REG COMMON STOCK CHF - 20170606

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|-------------------------|---------------|---------|----------|---------|------------------------|------------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | WILLIAM BLAIR & COMPANY | MERRILL LYNCH | SWI | CHF | B00ZC75 | 06/06/2017 09:00:00 | 06/06/2017 17:20:00 | 306,972 | 106.80 | 105.06 | +5,003 | +165.68 | N/A | 26.10 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 2.04% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

ABERTIS INFRAESTRUCTURAS SA CO - 20170419

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|--------------------------|---------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| S | S&P GLOBAL INFRAST-INDEX | MERRILL LYNCH | SPA | EUR | 4065663 | 04/19/2017 09:00:00 | 04/19/2017 17:30:00 | 517,196 | 15.80 | 15.92 | +4,242 | +81.36 | 0.72 | 0.59 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.73% of your market impact cost.

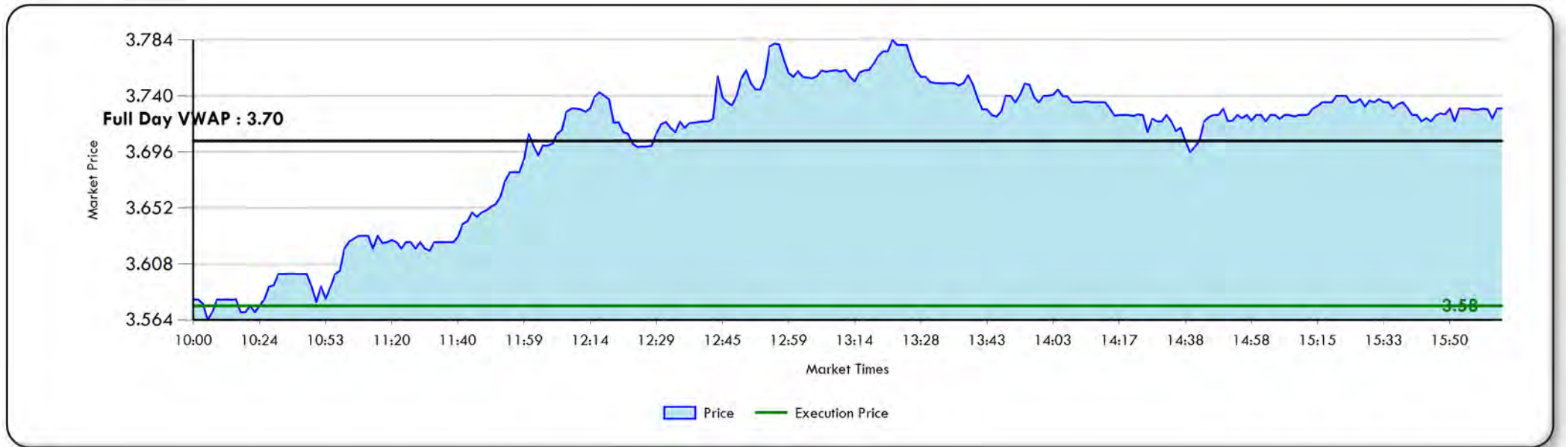


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

PRIMARY HEALTH CARE LTD COMMON - 20170508

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|----------------------|-------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| S | LSV ASSET MANAGEMENT | BNP PARIBAS | AST | AUD | 6117766 | 05/08/2017 10:00:00 | 05/08/2017 16:12:00 | 111,066 | 3.58 | 3.70 | +4,026 | +349.81 | 2.27 | 0.73 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.64% of your market impact cost.

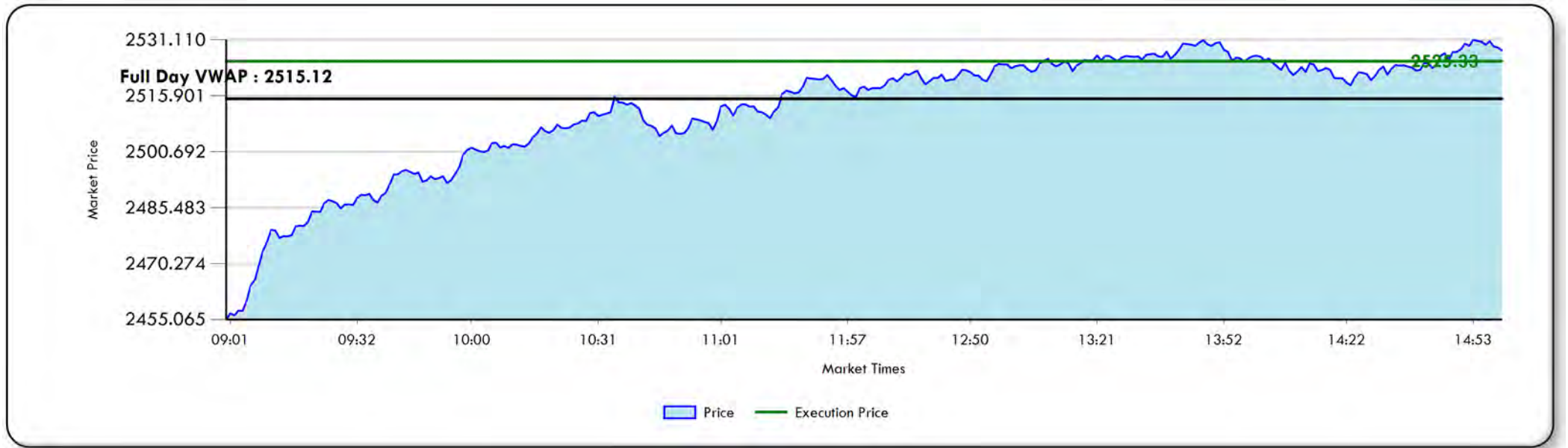


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

MITSUI FUDOSAN CO LTD COMMON S - 20170502

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|------------------------|---------------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | CBRE CLARION (INTL RE) | SMBC SECURITIES INC | JAP | JPY | 6597603 | 05/02/2017 09:00:00 | 05/02/2017 15:00:00 | 926,985 | 2525.33 | 2515.12 | +3,749 | +40.60 | 0.75 | 0.90 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.53% of your market impact cost.

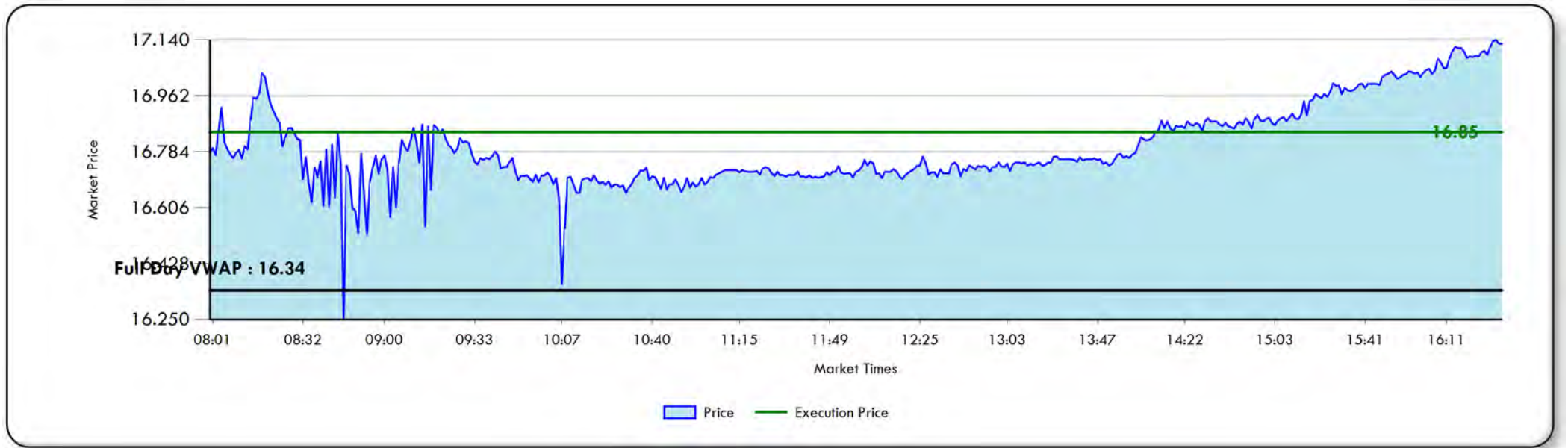


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

FEVERTREE DRINKS PLC COMMON ST - 20170525

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|-------------------------|---------------|---------|----------|---------|------------------------|------------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | WILLIAM BLAIR & COMPANY | INVESTEK BANK | UK | GBP | BRJ9BJ2 | 05/25/2017 08:00:00 | 05/25/2017 16:30:00 | 123,243 | 16.85 | 16.34 | +3,687 | +308.38 | N/A | 0.05 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.50% of your market impact cost.

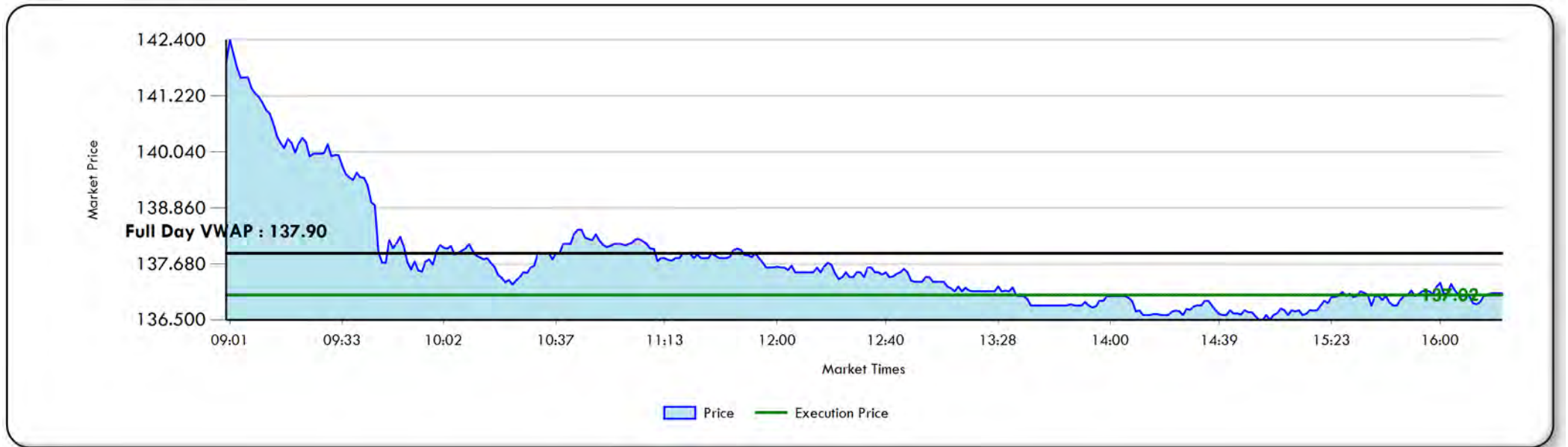


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

TELENOR ASA COMMON STOCK NOK6. - 20170504

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|-------------------------|---------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| S | LAZARD ASSET MANAGEMENT | MERRILL LYNCH | NOR | NOK | 4732495 | 05/04/2017 09:00:00 | 05/04/2017 16:20:00 | 488,478 | 137.02 | 137.90 | +3,129 | +63.65 | 0.58 | 1.76 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.27% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

COCA COLA EUROPEAN PARTNERS CO - 20170505

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|-------------------------|-----------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | LAZARD ASSET MANAGEMENT | JP MORGAN CHASE | NTH | EUR | BD4D942 | 05/05/2017 09:00:00 | 05/05/2017 17:30:00 | 930,517 | 36.17 | 36.05 | +3,111 | +33.54 | 0.79 | 16.64 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.27% of your market impact cost.

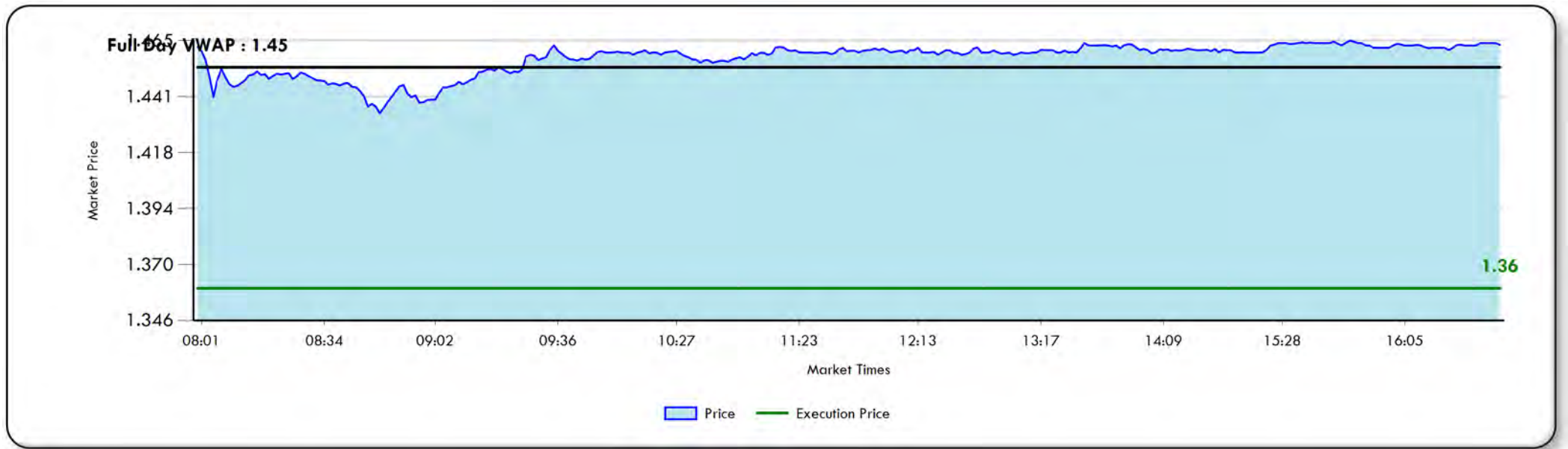


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

TRITAX BIG BOX REIT PLC REIT G - 20170511

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|------------------------|----------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | CBRE CLARION (INTL RE) | JEFFERIES & CO | UK | GBP | BG49KP9 | 05/11/2017 08:00:00 | 05/11/2017 16:30:00 | 486,903 | 1.36 | 1.45 | 33,559 | 644.78 | N/A | 2.42 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 13.21% of your market impact cost.

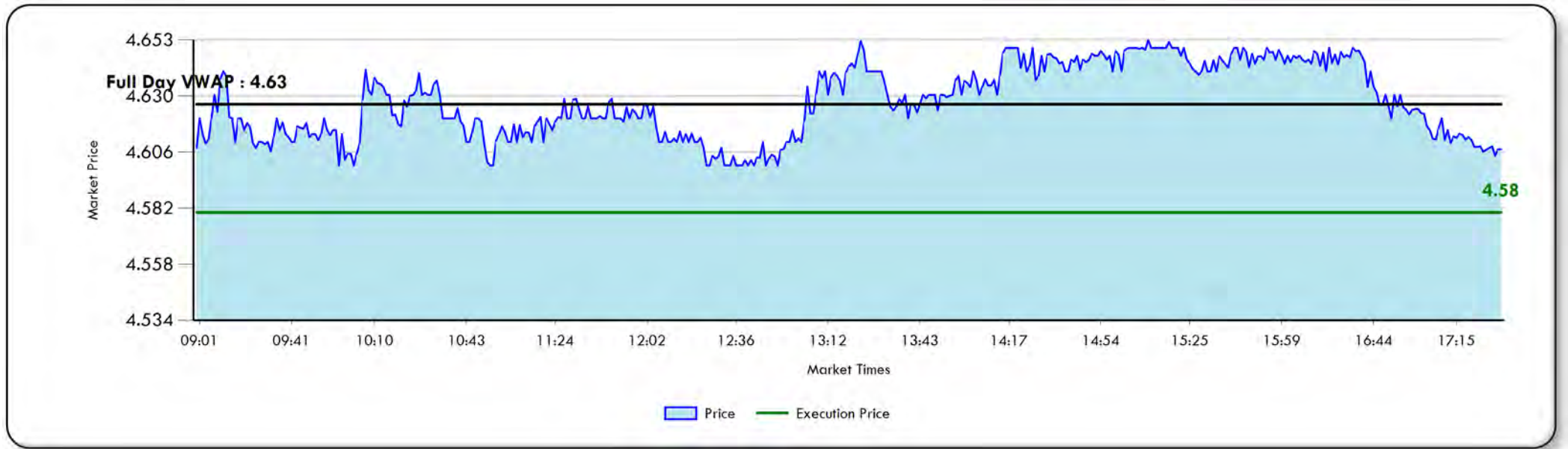


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

AROUNDTOWN PROPERTY HOLDINGS C - 20170510

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|------------------------|--------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | CBRE CLARION (INTL RE) | UBS | FRA | EUR | BYR8DFO | 05/10/2017 09:00:00 | 05/10/2017 17:30:00 | 803,545 | 4.58 | 4.63 | 8,073 | 99.47 | -3.07 | 3.37 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 3.18% of your market impact cost.

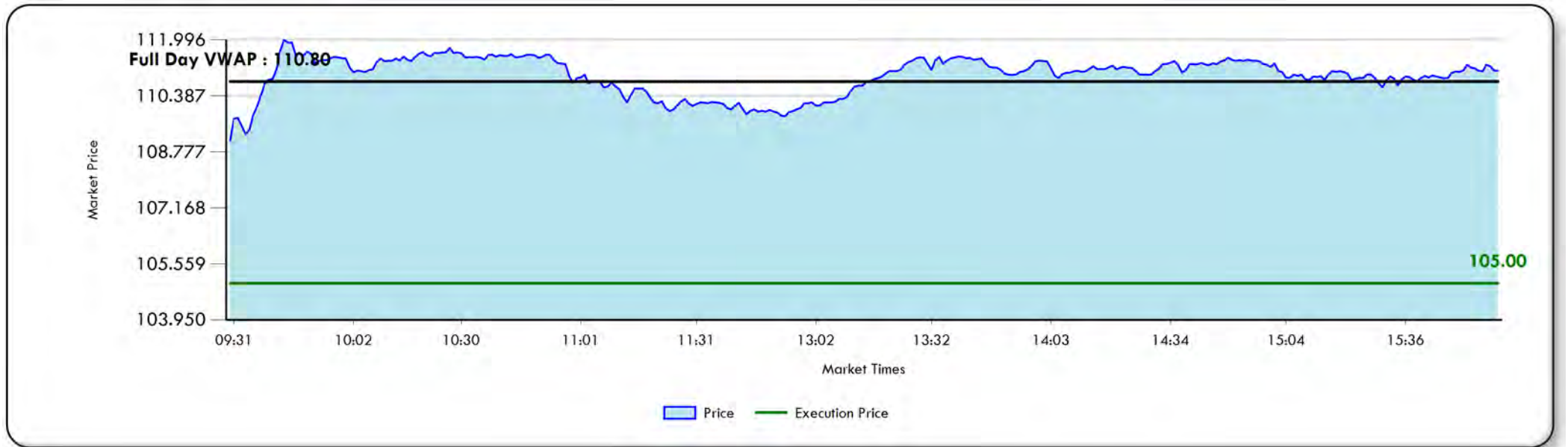


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

ASM PACIFIC TECHNOLOGY COMMON - 20170425

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|-------------------------|-----------|---------|----------|---------|------------------------|------------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | WILLIAM BLAIR & COMPANY | HSBC BANK | HKG | HKD | 6002453 | 04/25/2017 09:30:00 | 04/25/2017 16:00:00 | 106,616 | 105.00 | 110.80 | 5,890 | 523.55 | N/A | 0.11 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 2.32% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - LOW COST

SATS LTD COMMON STOCK - 20170519

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|-------------------------|-------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | WILLIAM BLAIR & COMPANY | BNP PARIBAS | SGP | SGD | 6243586 | 05/19/2017 09:00:00 | 05/19/2017 17:00:00 | 461,801 | 5.17 | 5.23 | 5,610 | 120.01 | -2.52 | 3.83 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 2.21% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - LOW COST

ATLANTIA SPA COMMON STOCK EUR1 - 20170419

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|--------------------------|---------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| S | S&P GLOBAL INFRAST-INDEX | MERRILL LYNCH | ITA | EUR | 7667163 | 04/19/2017 09:00:00 | 04/19/2017 17:30:00 | 611,891 | 23.22 | 23.02 | 5,264 | 86.77 | -1.28 | 0.50 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 2.07% of your market impact cost.

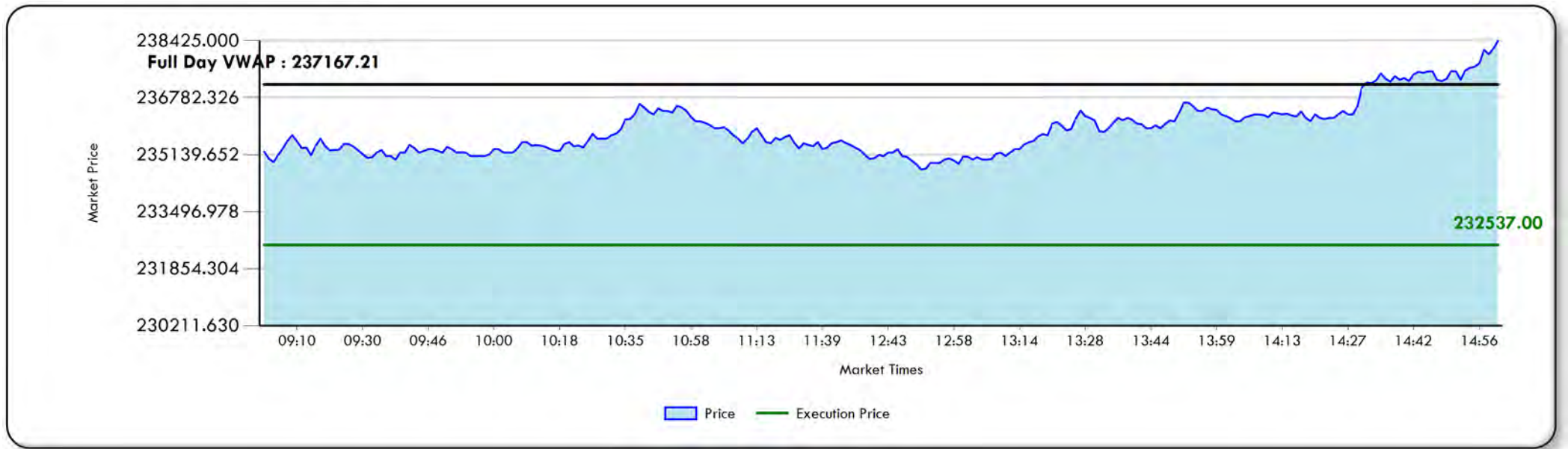


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

KENEDIX RETAIL REIT CORP REIT - 20170411

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|------------------------|--------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | CBRE CLARION (INTL RE) | NOMURA | JAP | JPY | BTLX226 | 04/11/2017 09:00:00 | 04/11/2017 15:00:00 | 244,626 | 232537.00 | 237167.21 | 4,871 | 195.22 | N/A | 1.36 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.92% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - LOW COST

ABN AMRO GROUP NV CVA DUTCH CE - 20170509

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|----------------------|--------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | LSV ASSET MANAGEMENT | UBS | NTH | EUR | BYQP136 | 05/09/2017 09:00:00 | 05/09/2017 17:30:00 | 706,445 | 24.93 | 25.07 | 3,756 | 52.88 | -0.81 | 1.15 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.48% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - LOW COST

AENA SA COMMON STOCK - 20170419

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|--------------------------|---------------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| S | S&P GLOBAL INFRAST-INDEX | MERRILL LYNCH | SPA | EUR | BVRZ8L1 | 04/19/2017 09:00:00 | 04/19/2017 17:30:00 | 640,096 | 155.40 | 154.52 | 3,622 | 56.91 | -0.71 | 2.01 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.43% of your market impact cost.

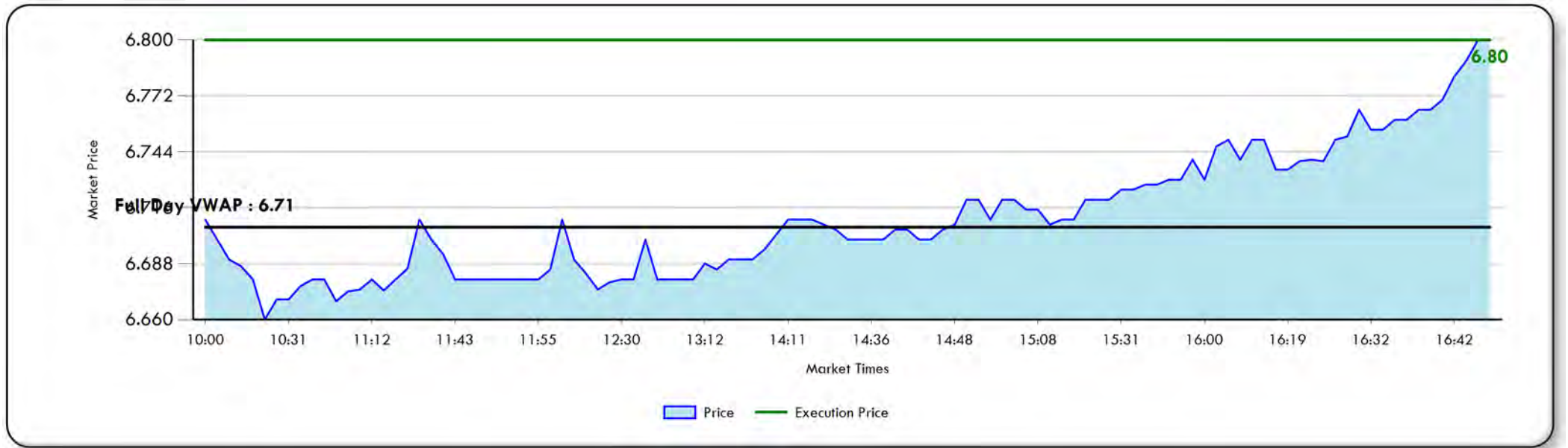


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

AUCKLAND INTL AIRPORT LTD COMM - 20170419

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|--------------------------|-----------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| S | S&P GLOBAL INFRAST-INDEX | MACQUARIE | NZL | NZD | BKX3XG2 | 04/19/2017 10:00:00 | 04/19/2017 16:45:00 | 250,561 | 6.80 | 6.71 | 3,457 | 139.91 | -2.86 | 14.62 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.36% of your market impact cost.

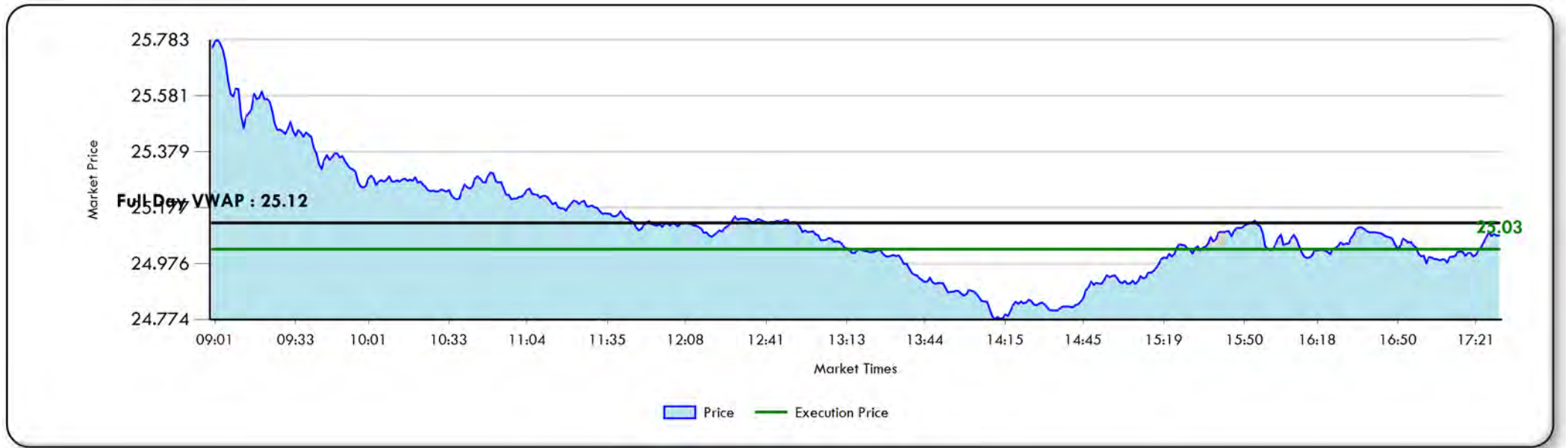


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

ABN AMRO GROUP NV CVA DUTCH CE - 20170508

| Side | Manager | Broker | Country | Currency | CUSIP | Time In | Time Out | Principal | Client Price | Full Day VWAP | Cost Full Day VWAP | Cost Full Day VWAP | E - Score | Volume |
|------|----------------------|--------|---------|----------|---------|---------------------|---------------------|-----------|--------------|---------------|--------------------|--------------------|-----------|--------|
| | | | | | | | | (\$) | | | (\$) | (bp) | | (%) |
| B | LSV ASSET MANAGEMENT | UBS | NTH | EUR | BYQP136 | 05/08/2017 09:00:00 | 05/08/2017 17:30:00 | 751,877 | 25.03 | 25.12 | 2,841 | 37.64 | -0.44 | 0.99 |

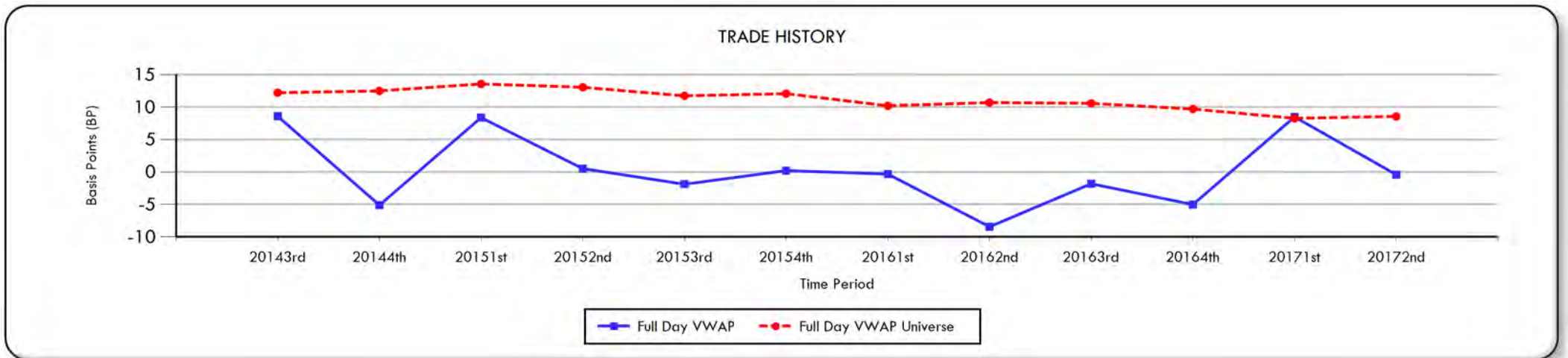


NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.12% of your market impact cost.

TRADE HISTORY

| Period | Total Principal (\$) | Commission (bp) | Commission Universe (bp) | Fees (bp) | Fees Universe (bp) | Full Day VWAP (bp) | Full Day VWAP Universe (bp) | Total Cost/Savings Vs. Universe (bp) |
|---------|-------------------------|--------------------|-----------------------------|--------------|-----------------------|-----------------------|--------------------------------|---|
| 20143rd | 241,057,898 | +9.95 | +17.56 | +6.32 | +7.26 | +8.57 | +12.20 | 12.19 |
| 20144th | 506,158,401 | +5.52 | +17.06 | +2.16 | +2.30 | 5.11 | +12.48 | 29.27 |
| 20151st | 128,681,090 | +9.88 | +16.54 | +6.39 | +6.57 | +8.36 | +13.55 | 12.03 |
| 20152nd | 105,915,243 | +8.16 | +17.11 | +6.69 | +6.43 | +0.51 | +13.04 | 21.21 |
| 20153rd | 125,280,679 | +8.08 | +15.73 | +6.43 | +6.85 | 1.90 | +11.72 | 21.69 |
| 20154th | 149,071,955 | +8.39 | +15.71 | +3.87 | +4.30 | +0.20 | +12.06 | 19.60 |
| 20161st | 122,988,471 | +7.80 | +15.62 | +4.75 | +5.22 | 0.33 | +10.19 | 18.81 |
| 20162nd | 188,544,188 | +7.40 | +16.20 | +5.32 | +5.52 | 8.45 | +10.68 | 28.14 |
| 20163rd | 170,434,065 | +7.69 | +16.36 | +6.62 | +6.96 | 1.82 | +10.56 | 21.39 |
| 20164th | 200,915,200 | +7.12 | +16.08 | +5.97 | +6.25 | 5.02 | +9.68 | 23.94 |
| 20171st | 193,287,065 | +8.16 | +15.81 | +6.67 | +6.60 | +8.47 | +8.26 | 7.37 |
| 20172nd | 199,438,944 | +6.90 | +14.86 | +4.37 | +4.99 | 0.43 | +8.55 | 17.56 |



Elkins/McSherry Global Universe

| Country | Price | Commission | Fees | Market Impact | Total |
|----------------|----------|------------|----------|---------------|----------|
| ARGENTINA | 2.97 BP | 42.15 BP | 0.00 BP | 24.97 BP | 67.12 BP |
| AUSTRALIA | 5.39 BP | 15.21 BP | 0.96 BP | 7.18 BP | 23.35 BP |
| AUSTRIA | 15.25 BP | 13.63 BP | 0.03 BP | 13.24 BP | 26.90 BP |
| BELGIUM | 60.68 BP | 13.86 BP | 0.01 BP | 7.80 BP | 21.67 BP |
| BRAZIL | 5.27 BP | 16.06 BP | 1.79 BP | 13.89 BP | 31.74 BP |
| CANADA | 12.78 BP | 16.82 BP | 0.02 BP | 7.87 BP | 24.71 BP |
| CHILE | 0.65 BP | 14.52 BP | 0.36 BP | 7.81 BP | 22.69 BP |
| CHINA | 1.77 BP | 14.05 BP | 10.11 BP | 3.77 BP | 27.93 BP |
| COLOMBIA | 0.87 BP | 26.03 BP | 0.73 BP | 21.33 BP | 48.09 BP |
| CZECH REPUBLIC | 24.57 BP | 18.32 BP | 0.00 BP | 6.46 BP | 24.78 BP |
| DENMARK | 48.82 BP | 13.82 BP | 0.01 BP | 11.48 BP | 25.31 BP |
| EGYPT | 2.25 BP | 33.59 BP | 0.58 BP | 15.47 BP | 49.64 BP |
| FINLAND | 15.24 BP | 12.90 BP | 0.02 BP | 12.75 BP | 25.67 BP |
| FRANCE - BUYS | 41.03 BP | 13.86 BP | 30.00 BP | 6.17 BP | 50.03 BP |
| FRANCE - SELLS | 44.64 BP | 13.76 BP | 0.00 BP | 6.35 BP | 20.11 BP |
| GERMANY | 38.36 BP | 14.13 BP | 0.01 BP | 7.78 BP | 21.92 BP |
| GREECE | 3.40 BP | 15.56 BP | 2.83 BP | 27.08 BP | 45.47 BP |
| HONG KONG | 1.59 BP | 14.78 BP | 9.66 BP | 2.88 BP | 27.32 BP |
| HUNGARY | 12.59 BP | 18.05 BP | 1.01 BP | 5.45 BP | 24.51 BP |
| INDIA | 7.04 BP | 19.55 BP | 9.97 BP | 5.10 BP | 34.62 BP |

Elkins/McSherry Global Universe

| Country | Price | Commission | Fees | Market Impact | Total |
|-----------------|----------|------------|-----------|---------------|-----------|
| INDONESIA | 0.44 BP | 17.99 BP | 8.44 BP | 6.97 BP | 33.40 BP |
| IRELAND - BUYS | 7.89 BP | 13.78 BP | 100.00 BP | 5.55 BP | 119.33 BP |
| IRELAND - SELLS | 0.67 BP | 14.74 BP | 0.00 BP | 33.42 BP | 48.16 BP |
| ISRAEL | 5.69 BP | 20.98 BP | 0.08 BP | 7.72 BP | 28.78 BP |
| ITALY - BUYS | 5.51 BP | 13.05 BP | 12.00 BP | 5.12 BP | 30.17 BP |
| ITALY - SELLS | 4.44 BP | 13.33 BP | 0.00 BP | 14.76 BP | 28.09 BP |
| JAPAN | 14.84 BP | 14.96 BP | 0.01 BP | 10.65 BP | 25.62 BP |
| KOREA - BUYS | 60.22 BP | 15.72 BP | 0.00 BP | 10.70 BP | 26.42 BP |
| KOREA - SELLS | 82.19 BP | 18.06 BP | 25.65 BP | 6.03 BP | 49.74 BP |
| LUXEMBOURG | 71.00 BP | 16.72 BP | 0.00 BP | 64.15 BP | 80.87 BP |
| MALAYSIA | 1.61 BP | 16.33 BP | 3.36 BP | 3.13 BP | 22.82 BP |
| MEXICO | 1.99 BP | 16.26 BP | 0.00 BP | 2.81 BP | 19.07 BP |
| NETHERLANDS | 32.66 BP | 14.06 BP | 0.24 BP | 7.42 BP | 21.72 BP |
| NEW ZEALAND | 3.05 BP | 14.91 BP | 0.02 BP | 12.16 BP | 27.09 BP |
| NORWAY | 10.79 BP | 20.01 BP | 0.02 BP | 12.32 BP | 32.35 BP |
| PERU | 0.81 BP | 19.31 BP | 0.27 BP | 11.25 BP | 30.83 BP |
| PHILIPPINES | 0.71 BP | 19.67 BP | 18.81 BP | 10.50 BP | 48.98 BP |
| POLAND | 7.12 BP | 16.43 BP | 0.00 BP | 8.76 BP | 25.19 BP |
| PORTUGAL | 2.93 BP | 14.00 BP | 0.02 BP | 13.37 BP | 27.39 BP |
| RUSSIA | 0.03 BP | 20.00 BP | 0.00 BP | 33.04 BP | 53.04 BP |

Elkins/McSherry Global Universe

| Country | Price | Commission | Fees | Market Impact | Total |
|----------------------|----------|------------|----------|---------------|----------|
| SINGAPORE | 2.25 BP | 14.84 BP | 3.55 BP | 4.08 BP | 22.47 BP |
| SOUTH AFRICA - BUYS | 7.31 BP | 15.23 BP | 23.05 BP | 9.68 BP | 47.96 BP |
| SOUTH AFRICA - SELLS | 6.03 BP | 14.87 BP | 0.02 BP | 7.25 BP | 22.14 BP |
| SPAIN | 7.56 BP | 13.91 BP | 0.00 BP | 7.23 BP | 21.14 BP |
| SWEDEN | 13.90 BP | 14.53 BP | 0.01 BP | 2.67 BP | 17.21 BP |
| SWITZERLAND | 63.78 BP | 13.73 BP | 0.03 BP | 7.07 BP | 20.83 BP |
| TAIWAN - BUYS | 1.96 BP | 16.94 BP | 0.00 BP | 3.43 BP | 20.37 BP |
| TAIWAN - SELLS | 2.29 BP | 17.93 BP | 27.19 BP | 6.54 BP | 51.66 BP |
| THAILAND | 1.94 BP | 17.51 BP | 0.99 BP | 5.63 BP | 24.13 BP |
| TURKEY | 2.39 BP | 15.42 BP | 0.04 BP | 8.41 BP | 23.87 BP |
| U.K. - BUYS | 5.50 BP | 14.20 BP | 50.00 BP | 4.10 BP | 68.30 BP |
| U.K. - SELLS | 7.48 BP | 14.43 BP | 0.00 BP | 26.36 BP | 40.79 BP |
| U.S. | 42.84 BP | 12.88 BP | 0.10 BP | 4.56 BP | 17.54 BP |
| VENEZUELA | 10.50 BP | 43.22 BP | 9.10 BP | 31.03 BP | 83.35 BP |
| TOTAL: 54 | 15.47 BP | 17.23 BP | 6.50 BP | 11.53 BP | 35.27 BP |

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SACRAMENTO COUNTY

Global Fixed Income Analysis

Period End June 30, 2017



Sacramento County
Period End June 30, 2017
(Global Fixed Income Analysis)

EXECUTIVE SUMMARY

Elkins/McSherry has been providing trading cost analyses to institutional investors since 1991. During that time we have produced Post-Trade Cost Analyses for many of the worlds largest investment managers, pension funds, banks, and broker dealers. Using this vast experience combined with an un-matched collection of global fixed income market and Universe data, Elkins/McSherry has recently produced a Trading Cost Analysis on behalf of Sacramento County. This study evaluates global fixed income executions from April 01,2017 to June 30,2017. The analysis included trading of 139 trades in 61 different issues representing \$65,905,018 in principal across governments and corporates.

Methodology:

The cost of each trade will be determined by comparing your executed price to the average or benchmark price of the issue on the day of the trade and to the Elkins/McSherry Fixed Income Trading Cost Universe. For comparison purposes, Elkins/McSherry establishes average institutional trading costs quarterly for governments, corporates and agency issues. The Universe is the average trading cost incurred by pension funds, investment managers, banks and brokers.

Results:

| GRAND TOTAL PERFORMANCE | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | | |
|-------------------------|-------------------------|------------------|------------------|---------------------------|------------------|------------------------|---|-----------------------------------|------------|------------|------------|------------|
| Buy/Sell | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| BUYS | 38 | 76 | 43 | 3.32 | 0.87 | +3.17 | 15.38 | 4.04 | 0.80 | 16.78 | +2.38 | +1.07 |
| SELLS | 28 | 63 | 36 | +14.20 | +5.09 | +3.17 | +5.36 | +1.92 | +6.72 | +11.94 | +1.98 | +4.93 |
| GRAND TOTAL | 66 | 139 | 61 | +10.87 | +1.65 | +3.17 | 10.02 | 1.52 | +2.75 | 0.96 | +2.18 | +2.94 |

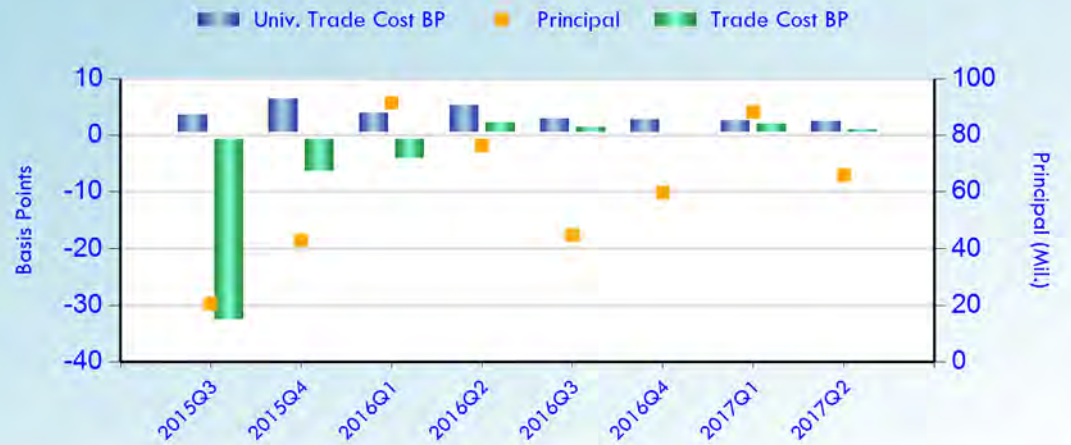
EXECUTIVE SUMMARY

| BOND TYPES PERFORMANCE | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | | |
|------------------------|---------------------|---------------|---------------|------------------------|---------------|---------------------|--------------------------------------|-----------------------------------|---------|---------|---------|---------|
| Bond Type | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| Governments | 50 | 89 | 25 | +1.73 | +0.35 | +3.17 | 14.08 | 2.82 | 0.02 | +5.81 | +3.61 | 0.89 |
| Corporates | 16 | 50 | 36 | +9.15 | +5.70 | +3.17 | +4.06 | +2.53 | +9.80 | +10.99 | 5.92 | 10.36 |

Bonds by Principal Traded



Historical Trade Cost Trend

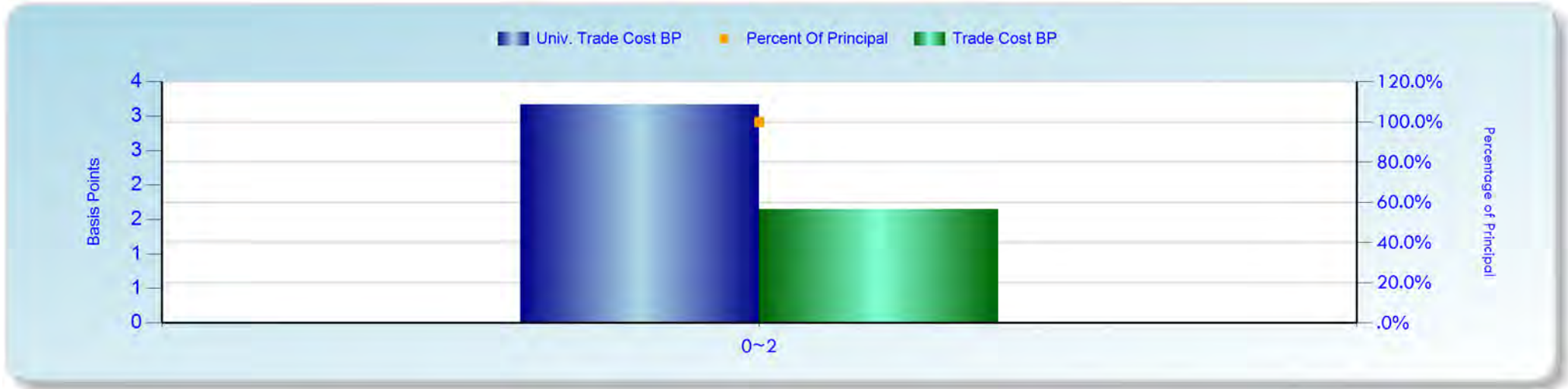




EXECUTIVE SUMMARY

EXECUTION PERFORMANCE SUMMARY

| Trade Size (Millions) | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP |
|-----------------------|---------------------|---------------|---------------|------------------------|---------------|---------------------|--------------------------------------|------|
| 0~2 | 66 | 139 | 61 | +10.87 | +1.65 | +3.17 | 10.02 | 1.52 |



EXECUTIVE SUMMARY

GRADING SUMMARY

| Grading | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP |
|-----------------------|---------------------|---------------|---------------|------------------------|---------------|---------------------|--------------------------------------|-------|
| Govt-INVESTMENT GRADE | 50 | 89 | 25 | +1.73 | +0.35 | +3.17 | 14.08 | 2.82 |
| Corp-INVESTMENT GRADE | 12 | 37 | 27 | +5.89 | +4.84 | +3.17 | +2.03 | +1.67 |
| Corp-High Yield | 4 | 13 | 9 | +3.26 | +8.43 | +3.17 | +2.03 | +5.26 |



EXECUTIVE SUMMARY

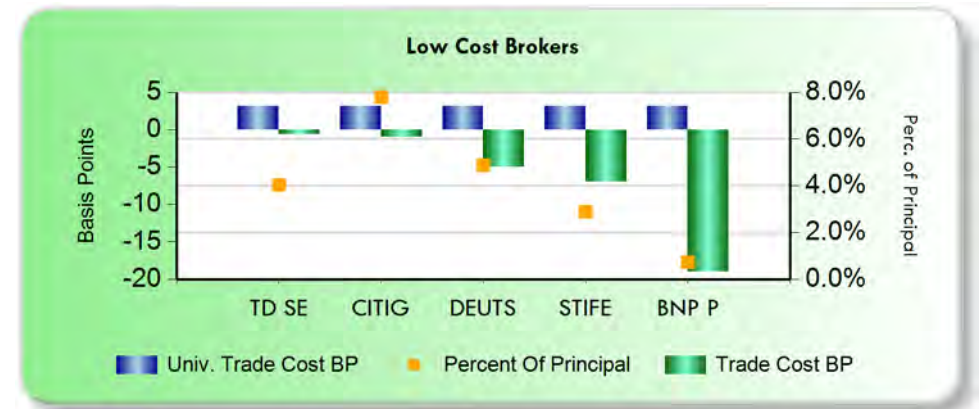
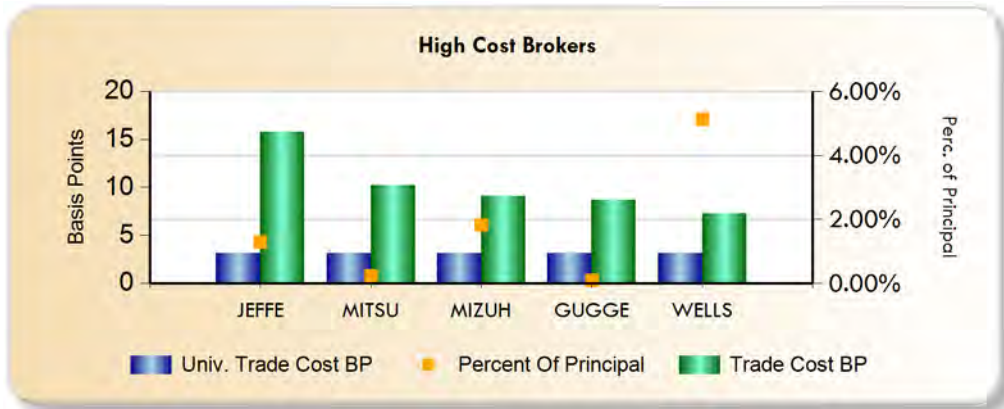
RATING SUMMARY

| Rating | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous.\$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | Cost Diff. from Universe BP |
|--------|-------------------------|------------------|------------------|--------------------------|------------------|------------------------|---|--------------------------------|
| AAA | 49.87 | 89 | 25 | +1.73 | +0.35 | +3.17 | 14.08 | 2.82 |
| BBB | 4.68 | 11 | 8 | +2.58 | +5.50 | +3.17 | +1.09 | +2.33 |
| BBB+ | 3.62 | 16 | 11 | +5.56 | +15.35 | +3.17 | +4.41 | +12.18 |
| BBB- | 1.78 | 5 | 3 | 2.03 | 11.38 | +3.17 | 2.60 | 14.55 |
| BB- | 1.27 | 4 | 2 | +1.07 | +8.38 | +3.17 | +0.66 | +5.21 |
| AA- | 1.03 | 1 | 1 | 1.82 | 17.65 | +3.17 | 2.15 | 20.82 |
| B+ | <1 | 1 | 1 | +0.87 | +9.40 | +3.17 | +0.58 | +6.23 |
| BB+ | <1 | 1 | 1 | +0.15 | +2.28 | +3.17 | 0.06 | 0.89 |
| A | <1 | 3 | 3 | +0.33 | +5.81 | +3.17 | +0.15 | +2.64 |
| A- | <1 | 1 | 1 | +1.28 | +26.29 | +3.17 | +1.12 | +23.12 |



EXECUTIVE SUMMARY

| BROKER | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous.\$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP |
|---|-------------------------|------------------|---------------|--------------------------|------------------|------------------------|---|--------|
| 5 HIGHEST COST BROKERS (Sorted By Trade Cost BP) | | | | | | | | |
| JEFFERIES & CO | <1 | 5 | 4 | +1.35 | +15.79 | +3.17 | +1.08 | +12.62 |
| MITSUBISHI UFJ SECS | <1 | 2 | 2 | +0.17 | +10.20 | +3.17 | +0.12 | +7.03 |
| MIZUHO | 1 | 4 | 4 | +1.10 | +9.11 | +3.17 | +0.72 | +5.94 |
| GUGGENHEIM | <1 | 1 | 1 | +0.06 | +8.72 | +3.17 | +0.04 | +5.55 |
| WELLS FARGO | 3 | 7 | 6 | +2.47 | +7.31 | +3.17 | +1.40 | +4.14 |
| 5 LOWEST COST BROKERS (Sorted By Trade Cost BP) | | | | | | | | |
| TD SECURITIES | 3 | 4 | 4 | 0.17 | 0.63 | +3.17 | 1.01 | 3.80 |
| CITIGROUP | 5 | 11 | 10 | 0.49 | 0.94 | +3.17 | 2.11 | 4.11 |
| DEUTSCHE BANK | 3 | 3 | 3 | 1.60 | 4.97 | +3.17 | 2.62 | 8.14 |
| STIFEL NICOLAUS & CO | 2 | 2 | 2 | 1.32 | 6.96 | +3.17 | 1.93 | 10.13 |
| BNP PARIBAS | <1 | 1 | 1 | 0.91 | 18.99 | +3.17 | 1.07 | 22.16 |



COUNTRY PERFORMANCE

| COUNTRY SUMMARY | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | | |
|-----------------|------------------------|------------------|------------------|---------------------------|------------------|------------------------|--|-----------------------------------|------------|------------|------------|------------|
| Country | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) BP | | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| UNITED STATES | 66 | 139 | 61 | +10.87 | +1.65 | +3.17 | 10.02 | 1.52 | +2.75 | 1.79 | +1.74 | +2.95 |



COUNTRY PERFORMANCE BASED ON BUYS AND SELLS

| Country | Side | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe | |
|---------|------|-------------------------|------------------|------------------|---------------------------|------------------|------------------------|--------------------------|-------|
| | | | | | | | | (Thous. \$) | BP |
| | | | | | | | | UNITED STATES | SELLS |
| | BUYS | 38 | 76 | 43 | 3.32 | 0.87 | +3.17 | 15.38 | 4.04 |

Manager PERFORMANCE

| Manager PERFORMANCE | | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | |
|----------------------|-------------------------|------------------|------------------|---------------------------|------------------|------------------------|--|------|-----------------------------------|------------|------------|------------|
| Manager | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) BP | | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| PRUDENTIAL INVESTMEN | 66 | 139 | 61 | +10.87 | +1.65 | +3.17 | 10.02 | 1.52 | +2.75 | 0.96 | +2.18 | +2.94 |

BROKER PERFORMANCE

| BROKER PERFORMANCE | | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | |
|----------------------|-------------------------|------------------|------------------|---------------------------|------------------|------------------------|--|--------|-----------------------------------|------------|------------|------------|
| BROKER | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) BP | | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| JP MORGAN CHASE | 14 | 24 | 19 | +1.62 | +1.14 | +3.17 | 2.89 | 2.03 | +16.69 | 5.64 | +4.16 | 16.69 |
| GOLDMAN SACHS | 12 | 23 | 17 | +2.46 | +2.07 | +3.17 | 1.30 | 1.10 | 1.83 | +8.01 | +6.85 | 9.03 |
| BANK OF AMERICA | 5 | 11 | 11 | +2.69 | +5.18 | +3.17 | +1.04 | +2.01 | 0.39 | +4.64 | 35.07 | +7.26 |
| CITIGROUP | 5 | 11 | 10 | 0.49 | 0.94 | +3.17 | 2.11 | 4.11 | 1.42 | 25.28 | +6.66 | +27.80 |
| WELLS FARGO | 3 | 7 | 6 | +2.47 | +7.31 | +3.17 | +1.40 | +4.14 | +2.51 | 12.65 | +0.35 | 15.67 |
| DEUTSCHE BANK | 3 | 3 | 3 | 1.60 | 4.97 | +3.17 | 2.62 | 8.14 | 2.68 | +20.96 | +8.37 | 8.97 |
| BARCLAYS | 3 | 9 | 9 | +1.16 | +3.98 | +3.17 | +0.24 | +0.81 | +5.85 | +14.74 | 6.43 | +1.07 |
| TD SECURITIES | 3 | 4 | 4 | 0.17 | 0.63 | +3.17 | 1.01 | 3.80 | 0.76 | - | - | - |
| RBC CAPITAL MARKETS | 3 | 12 | 5 | +1.28 | +5.08 | +3.17 | +0.48 | +1.91 | +14.09 | +102.21 | +7.87 | - |
| MORGAN STANLEY | 2 | 4 | 4 | +0.45 | +2.24 | +3.17 | 0.19 | 0.93 | +4.01 | +0.43 | 8.84 | +20.17 |
| BMO CAPITAL MARKETS | 2 | 2 | 2 | 0.11 | 0.55 | +3.17 | 0.71 | 3.72 | +2.06 | 1.69 | 0.22 | - |
| STIFEL NICOLAUS & CO | 2 | 2 | 2 | 1.32 | 6.96 | +3.17 | 1.93 | 10.13 | +26.04 | - | - | - |
| NOMURA | 2 | 3 | 3 | +0.33 | +1.88 | +3.17 | 0.23 | 1.29 | +0.27 | 0.86 | +1.02 | +2.09 |
| SCOTIA CAPITAL | 1 | 2 | 2 | +0.17 | +1.34 | +3.17 | 0.23 | 1.83 | 1.70 | - | - | - |
| MIZUHO | 1 | 4 | 4 | +1.10 | +9.11 | +3.17 | +0.72 | +5.94 | +13.25 | - | - | - |
| MCCOURTNEY BRECKERNR | 1 | 3 | 3 | +0.13 | +1.07 | +3.17 | 0.25 | 2.10 | - | - | - | - |
| CREDIT AGRICOLE | <1 | 2 | 2 | 0.05 | 0.49 | +3.17 | 0.36 | 3.66 | - | - | - | - |
| JEFFERIES & CO | <1 | 5 | 4 | +1.35 | +15.79 | +3.17 | +1.08 | +12.62 | +53.68 | +77.12 | +5.93 | +8.19 |
| BNP PARIBAS | <1 | 1 | 1 | 0.91 | 18.99 | +3.17 | 1.07 | 22.16 | +3.73 | +12.09 | +40.81 | - |
| BNY MELLON | <1 | 1 | 1 | +0.00 | +0.00 | +3.17 | 0.13 | 3.17 | 21.79 | +8.30 | +7.05 | +1.76 |
| 08430 | <1 | 2 | 2 | +0.00 | +0.09 | +3.17 | 0.10 | 3.08 | - | - | - | - |
| UBS | <1 | 1 | 1 | +0.08 | +2.78 | +3.17 | 0.01 | 0.39 | +17.44 | +28.08 | +15.70 | - |



BROKER PERFORMANCE

| BROKER PERFORMANCE | | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | |
|---------------------|------------------------|------------------|------------------|---------------------------|------------------|------------------------|--|-------|-----------------------------------|------------|------------|------------|
| BROKER | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) BP | | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| MITSUBISHI UFJ SECS | <1 | 2 | 2 | +0.17 | +10.20 | +3.17 | +0.12 | +7.03 | - | - | - | - |
| GUGGENHEIM | <1 | 1 | 1 | +0.06 | +8.72 | +3.17 | +0.04 | +5.55 | - | 217.95 | - | - |

TRADE DETAILS

| Buy/Sell | Security | Bond Type | Trade Date/ Maturity | Manager/ Broker | Cty | Local Curr. | Principal (\$) | Price | Benchmark Price | Trade Cost BP | Trading Cost |
|-------------------------------|--|-----------|--------------------------|------------------------------------|-----|----------------|-------------------|---------|--------------------|------------------|--------------|
| 15 Highest Cost Trades | | | | | | | | | | | |
| B | 912810QL US TREASURY N/B | Govt | 06/07/2017 11/15/2040 | PRUDENTIAL INVE CITIGROUP | US | USD | 1,511,400 | 126.477 | 126.201 | +21.79 | +3,294 |
| S | 912828X8 US TREASURY N/B 05/27 2.375 | Govt | 05/17/2017 05/15/2027 | PRUDENTIAL INVE JP MORGAN CHASE | US | USD | 940,462 | 101.125 | 101.330 | +20.27 | +1,907 |
| S | 92343VCM VERIZON COMMUNICATIONS SR UN | Corp | 06/21/2017 08/21/2054 | PRUDENTIAL INVE RBC CAPITAL MAR | US | USD | 232,477 | 101.077 | 101.788 | +70.37 | +1,636 |
| B | 912810QL US TREASURY N/B | Govt | 06/07/2017 11/15/2040 | PRUDENTIAL INVE GOLDMAN SACHS | US | USD | 708,310 | 126.484 | 126.201 | +22.35 | +1,583 |
| B | 15135UAN CENOVUS ENERGY INC SR UNSECU | Corp | 06/29/2017 06/15/2037 | PRUDENTIAL INVE GOLDMAN SACHS | US | USD | 496,790 | 93.734 | 93.467 | +28.48 | +1,415 |
| B | BXQ9SQ3 TOKYO METROPOLITAN GOVT SR U | Govt | 04/25/2017 05/19/2020 | PRUDENTIAL INVE MIZUHO | US | USD | 399,008 | 99.752 | 99.428 | +32.52 | +1,297 |
| S | 456837AH ING GROEP NV SR UNSECURED 03 | Corp | 04/28/2017 03/29/2027 | PRUDENTIAL INVE BANK OF AMERICA | US | USD | 485,673 | 102.247 | 102.516 | +26.29 | +1,277 |
| S | 552953BW MGM RESORTS INTL COMPANY GUA | Corp | 06/14/2017 02/01/2019 | PRUDENTIAL INVE WELLS FARGO | US | USD | 523,687 | 110.250 | 110.456 | +18.67 | +978 |
| S | 912828X8 US TREASURY N/B 05/27 2.375 | Govt | 06/22/2017 05/15/2027 | PRUDENTIAL INVE WELLS FARGO | US | USD | 1,631,062 | 101.941 | 102.000 | +5.75 | +937 |
| S | 345838AA FOREST LABORATORIES LLC COMP | Corp | 06/07/2017 12/15/2021 | PRUDENTIAL INVE BANK OF AMERICA | US | USD | 780,531 | 109.934 | 110.066 | +11.99 | +936 |
| S | 423012AF HEINEKEN NV SR UNSECURED 144 | Corp | 04/18/2017 01/29/2028 | PRUDENTIAL INVE JP MORGAN CHASE | US | USD | 638,800 | 102.208 | 102.354 | +14.30 | +913 |
| S | 912828X8 US TREASURY N/B 05/27 2.375 | Govt | 05/19/2017 05/15/2027 | PRUDENTIAL INVE GOLDMAN SACHS | US | USD | 1,203,852 | 101.164 | 101.240 | +7.51 | +904 |
| B | 912828X8 US TREASURY N/B 05/27 2.375 | Govt | 05/15/2017 05/15/2027 | PRUDENTIAL INVE BARCLAYS | US | USD | 1,003,593 | 100.359 | 100.270 | +8.91 | +894 |
| B | 404121AD HCA INC | Corp | 06/30/2017 02/15/2022 | PRUDENTIAL INVE BANK OF AMERICA | US | USD | 923,000 | 115.375 | 115.267 | +9.40 | +868 |



| | | | | | | | | | | | |
|---|---|------|--------------------------|----------------------------------|----|-----|-----------|---------|---------|-------|------|
| S | 912828X4 US TREASURY N/B 04/22 1.875 | Govt | 05/30/2017 04/30/2022 | PRUDENTIAL INVE TD SECURITIES | US | USD | 1,034,546 | 100.441 | 100.520 | +7.82 | +809 |
|---|---|------|--------------------------|----------------------------------|----|-----|-----------|---------|---------|-------|------|



TRADE DETAILS

| Buy/Sell | Security | Bond Type | Trade Date/ Maturity | Manager/ Broker | Cty | Local Curr. | Principal (\$) | Price | Benchmark Price | Trade Cost BP | Trading Cost |
|------------------------------|--|-----------|--------------------------|------------------------------------|-----|----------------|-------------------|---------|--------------------|------------------|--------------|
| 15 Lowest Cost Trades | | | | | | | | | | | |
| S | 912810RK US TREASURY N/B 02/45 2.5 | Govt | 06/07/2017 02/15/2045 | PRUDENTIAL INVE CITIGROUP | US | USD | 1,222,010 | 93.641 | 93.385 | 27.35 | 3,342 |
| B | 82481LAB SHIRE ACQ INV IRELAND DA COM | Corp | 04/03/2017 09/23/2021 | PRUDENTIAL INVE DEUTSCHE BANK | US | USD | 1,373,470 | 98.105 | 98.265 | 16.30 | 2,239 |
| B | 219868BX CORP ANDINA DE FOMENTO SR UN | Corp | 06/29/2017 09/27/2021 | PRUDENTIAL INVE STIFEL NICOLAUS | US | USD | 1,032,356 | 99.265 | 99.440 | 17.65 | 1,822 |
| S | 912810RK US TREASURY N/B 02/45 2.5 | Govt | 06/07/2017 02/15/2045 | PRUDENTIAL INVE GOLDMAN SACHS | US | USD | 575,985 | 93.656 | 93.385 | 29.01 | 1,671 |
| B | 912828X7 US TREASURY N/B 04/24 2 | Govt | 04/28/2017 04/30/2024 | PRUDENTIAL INVE JP MORGAN CHASE | US | USD | 758,664 | 99.172 | 99.380 | 20.99 | 1,592 |
| B | 912828V9 US TREASURY N/B 02/27 2.25 | Govt | 04/28/2017 02/15/2027 | PRUDENTIAL INVE BANK OF AMERICA | US | USD | 452,725 | 99.500 | 99.714 | 21.53 | 975 |
| B | 824348AW SHERWIN WILLIAMS CO SR UNSEC | Corp | 05/02/2017 06/01/2027 | PRUDENTIAL INVE CITIGROUP | US | USD | 169,382 | 99.637 | 100.210 | 57.51 | 974 |
| B | 912828XR US TREASURY N/B 05/22 1.75 | Govt | 05/30/2017 05/31/2022 | PRUDENTIAL INVE TD SECURITIES | US | USD | 1,013,731 | 99.875 | 99.970 | 9.51 | 964 |
| B | 912810QX US TREASURY N/B | Govt | 04/26/2017 08/15/2042 | PRUDENTIAL INVE BNP PARIBAS | US | USD | 481,347 | 96.270 | 96.452 | 18.99 | 914 |
| B | 912828XR US TREASURY N/B 05/22 1.75 | Govt | 05/30/2017 05/31/2022 | PRUDENTIAL INVE BMO CAPITAL MAR | US | USD | 948,812 | 99.875 | 99.970 | 9.51 | 903 |
| B | 912810RV US TREASURY N/B 02/47 3 | Govt | 06/21/2017 02/15/2047 | PRUDENTIAL INVE RBC CAPITAL MAR | US | USD | 199,678 | 105.094 | 105.542 | 42.65 | 852 |
| B | 912828X8 US TREASURY N/B 05/27 2.375 | Govt | 06/22/2017 05/15/2027 | PRUDENTIAL INVE JP MORGAN CHASE | US | USD | 1,631,187 | 101.949 | 102.000 | 4.98 | 812 |
| B | 912828XT US TREASURY N/B 05/24 2 | Govt | 05/30/2017 05/31/2024 | PRUDENTIAL INVE JP MORGAN CHASE | US | USD | 473,449 | 99.674 | 99.830 | 15.68 | 743 |
| B | 912828W8 US TREASURY N/B 03/22 1.875 | Govt | 04/03/2017 03/31/2022 | PRUDENTIAL INVE TD SECURITIES | US | USD | 304,428 | 99.813 | 100.046 | 23.35 | 711 |
| B | 94973VBF ANTHEM INC SR UNSECURED 01/4 | Corp | 04/06/2017 01/15/2044 | PRUDENTIAL INVE BANK OF AMERICA | US | USD | 200,399 | 108.324 | 108.686 | 33.39 | 669 |



AGENCIES



BOND TYPE PERFORMANCE

| Bond Type | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous.\$) | BP |
|------------|------------------------|------------------|------------------|---------------------------|------------------|------------------------|--|-------|
| CORPORATES | 16 | 50 | 36 | +9.15 | +5.70 | +3.17 | +4.06 | +2.53 |

CORPORATES



BOND TYPE PERFORMANCE

| Bond Type | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe | |
|-------------|-------------------------|------------------|---------------|---------------------------|------------------|------------------------|--------------------------|------|
| | | | | | | | (Thous.\$) | BP |
| GOVERNMENTS | 50 | 89 | 25 | +1.73 | +0.35 | +3.17 | 14.08 | 2.82 |

GOVERNMENTS



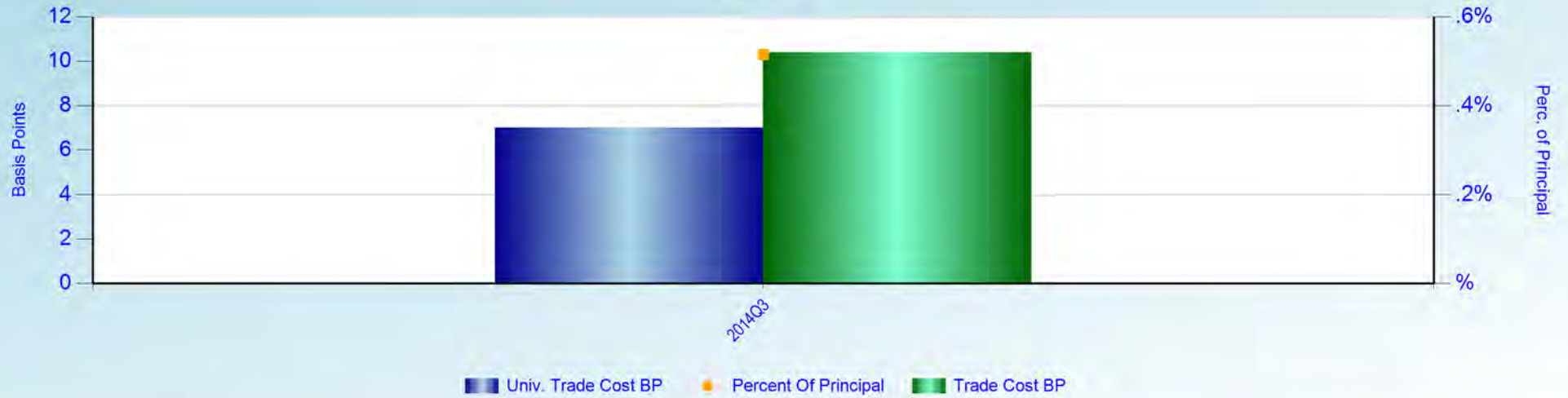


MORTGAGES





UNCLASSIFIED



RATING BY EACH BOND TYPE

GOVERNMENTS - RATING DETAILS

| Rating | Principal | No. of | No. of Issues | Trade Cost | Trade Cost | Univ. Trade | Cost Diff. from Universe | |
|--------|------------|--------|---------------|-------------|------------|-------------|--------------------------|------|
| | (Mil. \$) | Trades | | (Thous. \$) | BP | Cost BP | (Thous. \$) | BP |
| AAA | 50 | 89 | 25 | +1.73 | +0.35 | +3.17 | 14.08 | 2.82 |

RATING BY EACH BOND TYPE

CORPORATES - RATING DETAILS

| Rating | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost | | Univ. Trade | | Cost Diff. from Universe | |
|--------|-------------------------|------------------|------------------|-------------|--------|-------------|-------------|--------------------------|--|
| | | | | (Thous. \$) | BP | Cost BP | (Thous. \$) | BP | |
| BBB | 5 | 11 | 8 | +2.58 | +5.50 | +3.17 | +1.09 | +2.33 | |
| BBB+ | 4 | 16 | 11 | +5.56 | +15.35 | +3.17 | +4.41 | +12.18 | |
| BBB- | 2 | 5 | 3 | 2.03 | 11.38 | +3.17 | 2.60 | 14.55 | |
| BB- | 1 | 4 | 2 | +1.07 | +8.38 | +3.17 | +0.66 | +5.21 | |
| AA- | 1 | 1 | 1 | 1.82 | 17.65 | +3.17 | 2.15 | 20.82 | |
| B+ | <1 | 1 | 1 | +0.87 | +9.40 | +3.17 | +0.58 | +6.23 | |
| BB+ | <1 | 1 | 1 | +0.15 | +2.28 | +3.17 | 0.06 | 0.89 | |
| A | <1 | 3 | 3 | +0.33 | +5.81 | +3.17 | +0.15 | +2.64 | |
| A- | <1 | 1 | 1 | +1.28 | +26.29 | +3.17 | +1.12 | +23.12 | |
| CCC+ | <1 | 3 | 2 | +0.80 | +19.98 | +3.17 | +0.67 | +16.81 | |
| BB | <1 | 1 | 1 | +0.00 | +0.00 | +3.17 | 0.07 | 3.17 | |
| B- | <1 | 2 | 1 | +0.08 | +3.89 | +3.17 | +0.01 | +0.72 | |
| B | <1 | 1 | 1 | +0.29 | +15.49 | +3.17 | +0.23 | +12.32 | |



COUNTRIES BY EACH BOND TYPE

| GOVERNMENTS | | | | | | | | |
|---------------|-------------------------|------------------|---------------|---------------------------|------------------|------------------------|---|------|
| Country | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP |
| UNITED STATES | 50 | 89 | 25 | +1.73 | +0.35 | +3.17 | 14.08 | 2.82 |



COUNTRIES BY EACH BOND TYPE

| CORPORATES | | | | | | | | |
|---------------|-------------------------|------------------|---------------|---------------------------|------------------|------------------------|--------------------------|-------|
| Country | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe | |
| | | | | | | | (Thous. \$) | BP |
| UNITED STATES | 16 | 50 | 36 | +9.15 | +5.70 | +3.17 | +4.06 | +2.53 |

HISTORICAL DATA

| Quarter | Principal (Thous. \$) | No. of Trades | No. of Issues | Trade Cost | | Univ. Trade Cost BP | Cost Diff. from Universe | |
|-----------------------|--------------------------|------------------|---------------|-------------|--------|------------------------|--------------------------|--------|
| | | | | (Thous. \$) | BP | | (Thous. \$) | BP |
| 04/01/2017-06/30/2017 | 65,905 | 139 | 61 | +10.87 | +1.65 | +3.17 | 10.02 | 1.52 |
| 01/01/2017-03/31/2017 | 88,323 | 207 | 89 | +24.27 | +2.75 | +3.32 | 5.07 | 0.57 |
| Year-Ending 2017 | 154,228 | 346 | | +35.14 | +2.28 | +3.26 | 15.09 | 0.98 |
| 10/01/2016-12/31/2016 | 59,762 | 110 | 50 | 5.73 | 0.96 | +3.49 | 26.57 | 4.45 |
| 07/01/2016-09/30/2016 | 44,927 | 135 | 53 | +9.79 | +2.18 | +3.58 | 6.28 | 1.40 |
| 04/01/2016-06/30/2016 | 76,455 | 102 | 58 | +22.49 | +2.94 | +5.97 | 23.17 | 3.03 |
| 01/02/2016-03/31/2016 | 91,594 | 125 | 57 | 42.69 | 4.66 | +4.69 | 85.61 | 9.35 |
| Year-Ending 2016 | 272,738 | 472 | | 16.14 | 0.59 | +4.60 | 141.63 | 5.19 |
| 10/01/2015-12/31/2015 | 43,193 | 60 | 34 | 29.83 | 6.91 | +7.18 | 60.85 | 14.09 |
| 07/01/2015-09/30/2015 | 20,663 | 41 | 24 | 68.34 | 33.07 | +4.30 | 77.22 | 37.37 |
| 04/01/2015-06/30/2015 | 143,060 | 122 | 71 | 98.11 | 6.86 | +5.55 | 177.48 | 12.41 |
| 01/01/2015-03/31/2015 | 116,093 | 109 | 56 | 60.79 | 5.24 | +5.51 | 124.75 | 10.75 |
| Year-Ending 2015 | 323,008 | 332 | | 257.06 | 7.96 | +5.67 | 440.30 | 13.63 |
| 10/01/2014-12/31/2014 | 48,315 | 72 | 50 | +9.25 | +1.91 | +5.72 | 18.39 | 3.81 |
| 07/01/2014-09/30/2014 | 266,740 | 204 | 99 | 216.37 | 8.11 | +7.08 | 405.13 | 15.19 |
| 04/01/2014-06/30/2014 | 244,265 | 204 | 138 | +42.48 | +1.74 | +8.55 | 166.48 | 6.81 |
| 01/02/2014-03/31/2014 | 187,634 | 187 | 128 | +186.20 | +9.92 | +8.13 | +33.59 | +1.79 |
| Year-Ending 2014 | 746,953 | 667 | | +21.55 | +0.29 | +7.74 | 556.41 | 7.45 |
| 10/01/2013-12/31/2013 | 143,798 | 142 | 84 | +56.51 | +3.93 | +8.36 | 63.70 | 4.43 |
| 07/01/2013-09/30/2013 | 187,166 | 136 | 90 | +47.79 | +2.55 | +6.68 | 77.19 | 4.13 |
| 04/01/2013-06/30/2013 | 157,154 | 129 | 98 | +104.81 | +6.67 | +1.44 | +82.21 | +5.23 |
| 01/02/2013-03/31/2013 | 281,064 | 206 | 156 | +366.87 | +13.05 | +1.56 | +323.04 | +11.49 |
| Year-Ending 2013 | 769,183 | 613 | | +575.98 | +7.49 | +4.05 | +264.35 | +3.44 |
| 10/01/2012-12/31/2012 | 132,722 | 116 | 90 | +470.95 | +35.48 | +2.11 | +442.94 | +33.37 |

HISTORICAL DATA

| Quarter | Principal (Thous. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe | |
|-----------------------|--------------------------|------------------|------------------|---------------------------|------------------|------------------------|--------------------------|--------|
| | | | | | | | (Thous. \$) | BP |
| 07/01/2012-09/30/2012 | 120,859 | 101 | 77 | +125.20 | +10.36 | +2.09 | +99.92 | +8.27 |
| 04/01/2012-06/30/2012 | 85,150 | 85 | 60 | +71.84 | +8.44 | +2.27 | +52.54 | +6.17 |
| 01/02/2012-03/31/2012 | 31,666 | 13 | 9 | 0.75 | 0.24 | +7.38 | 24.12 | 7.62 |
| Year-Ending 2012 | 370,398 | 315 | | +667.24 | +18.01 | +2.59 | +571.28 | +15.42 |
| 10/01/2011-12/31/2011 | 54,456 | 22 | 11 | +249.88 | +45.89 | +3.18 | +232.57 | +42.71 |
| 07/01/2011-09/30/2011 | 45,561 | 26 | 10 | +31.66 | +6.95 | +4.14 | +12.80 | +2.81 |
| 04/01/2011-06/30/2011 | 40,214 | 15 | 6 | +83.99 | +20.88 | +4.01 | +67.86 | +16.87 |
| 01/02/2011-03/31/2011 | 45,680 | 23 | 3 | +2.18 | +0.48 | +5.21 | 21.63 | 4.73 |
| Year-Ending 2011 | 185,912 | 86 | | +367.70 | +19.78 | +4.09 | +291.59 | +15.68 |
| 10/01/2010-12/31/2010 | 57,022 | 27 | 11 | 152.30 | 26.71 | +8.46 | 200.51 | 35.17 |
| Year-Ending 2010 | 57,022 | 27 | | 152.30 | 26.71 | +8.46 | 200.51 | 35.16 |



BENCHMARK VENDOR REPORT

| Bonds | Number of Trades | Number of Issues | Vendor Benchmark | Percent Of Principal |
|-------------|------------------|------------------|-------------------------|----------------------|
| CORPORATES | 43 | 33 | BLOOMBERGTERMINAL | 84.19 % |
| | 6 | 5 | ISSUE PRICE | 11.36 % |
| | 1 | 1 | MARKETAXESS-SUMMARYDATA | 4.45 % |
| GOVERNMENTS | 85 | 22 | BLOOMBERGTERMINAL | 96.74 % |
| | 4 | 4 | ISSUE PRICE | 3.26 % |

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SACRAMENTO COUNTY

Trade Cost Summary - U.S. Equity Trading

Period End June 30, 2017





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(+) = Cost

EXECUTIVE SUMMARY

Elkins/McSherry has been providing trading cost analysis to institutional investors since 1991, serving many of the worlds largest investment managers, pension funds, banks, and broker dealers. Using this vast experience combined with an un-matched collection of global equity market and Universe data, Elkins/McSherry has produced a Trading Cost Analysis on behalf of SACRAMENTO COUNTY. This study evaluates U.S. equity executions from April 1 , 2017 to June 30, 2017. The analysis included trading of 5,271,800 shares representing \$199.35 million in principal.

Methodology :

The Elkins/McSherry analysis measures trading efficiency by quantifying the cost of brokerage commission and execution quality versus a Full Day VWAP benchmark for each of the securities traded. These data have been aggregated to summarize results by Buy/Sell, Commissions, Market Impact, Short Term Alpha, Market Cap, Trade Difficulty and Trade Detail. These results are quantified in USD as well as being displayed graphically to highlight the outcomes.

Results :

BENCHMARK PERFORMANCE

| Commission | Full Day VWAP | E - Score |
|---|--|---|
| <ul style="list-style-type: none"> Your commission cost was +2.32 cps (+6.14 bp) or +\$122,417 (0.01 cps (0.02 bp) better than the Elkins/McSherry All Trading Universe) | <ul style="list-style-type: none"> Your market impact savings was 1.05 cps (2.78 bp) or 2.37 cps (6.26 bp) better than the Elkins/McSherry Universe Your overall trading cost of +1.27 cps (+3.36 bp) was 2.38 cps (6.28 bp) better than the Elkins/McSherry Universe Full Day VWAP Universe Rank: 91% Total Cost Universe Rank: 85% | <ul style="list-style-type: none"> E-Score Rank : 54 E-Score : 0.62 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) | |
|------------------|-------------|----------------|---------|---------------------|---------------|
| Bundled | All Trading | Execution Only | Program | Median | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | 75 % | +1.32 |
| | | | | 25 % | +0.33 |
| | | | | | +2.60 |



(+) = Cost

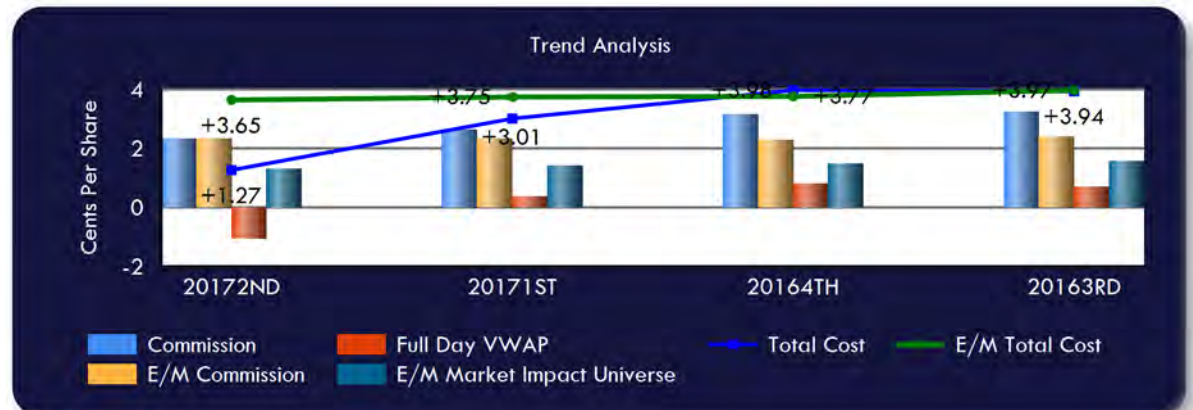
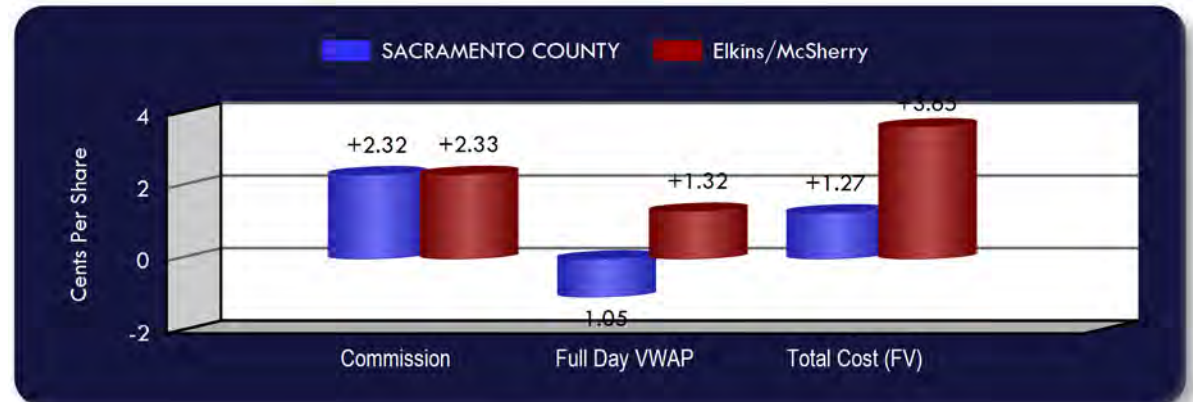
EXECUTIVE SUMMARY

TOTAL PORTFOLIO COST PERFORMANCE

| Side | COMMISSION | | | MARKET IMPACT | | Total Cost | Total Cost/Savings Vs. Universe | E - Score (Rank) | E -Score |
|-------|-------------------------------|-------------------------------|---------------------------|------------------------|---------------------------------|------------|------------------------------------|---------------------|----------|
| | Your Avg. Commission (cps) | All Trading Universe (cps) | Bundled Universe (cps) | Full Day VWAP (cps) | Universe Full Day VWAP (cps) | (cps) | Commission+ Full Day VWAP (cps) | | |
| Buys | +2.27 | +2.33 | +3.59 | 2.06 | +1.32 | +0.21 | 3.44 | 49 | 0.68 |
| Sells | +2.38 | +2.33 | +3.59 | +0.05 | +1.32 | +2.43 | 1.21 | 58 | 0.55 |
| Total | +2.32 | +2.33 | +3.59 | 1.05 | +1.32 | +1.27 | 2.38 | 54 | 0.62 |

TRADING COMPONENTS

| | Buys | Sells |
|----------------------------------|-------------|------------|
| Trade Principal | 102,824,097 | 96,522,553 |
| Shares | 2,754,786 | 2,517,014 |
| Unique Names | 477 | 525 |
| Liquidity (% ADV) | 0.103 | 0.085 |
| Avg. Execution Size | 2,335 | 2,144 |
| Avg. Order Completion Time (min) | N/A | N/A |
| Total Number of Trades | 1,180 | 1,174 |



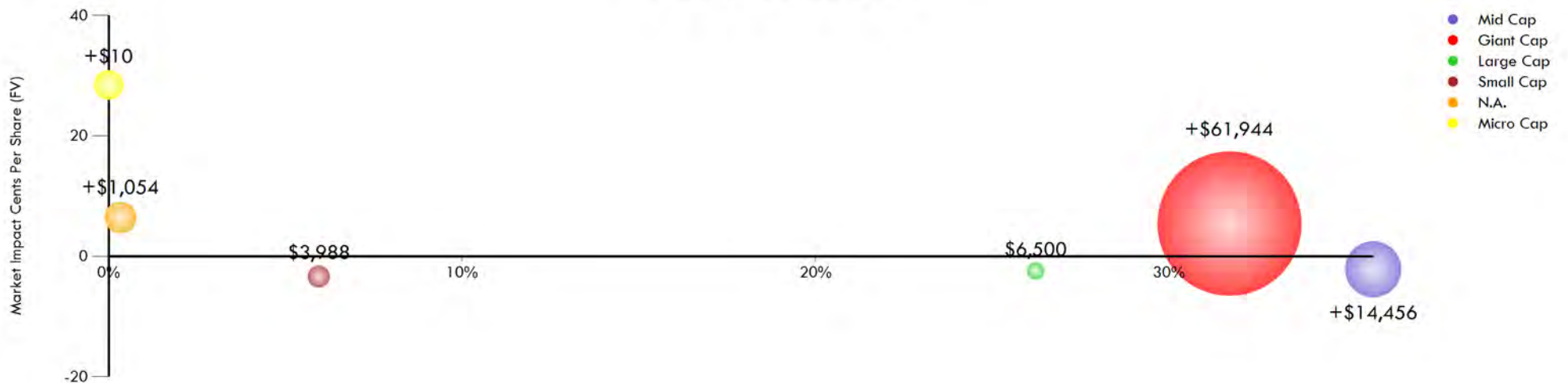
(+) = Cost

EXECUTIVE SUMMARY

MARKET CAPITALIZATION

| Market Cap | % Traded | Avg. Shares Per Order | COMMISSION | | MARKET IMPACT | | | Total Cost | Total Cost/Savings | E - Score | E - Score | Market Cap Definition |
|------------|----------|-----------------------|-----------------|----------------------|---------------|------------------------|--------------------|------------|--------------------|-----------|-----------|-----------------------|
| | | | Your Commission | All Trading Universe | Full Day VWAP | Universe Full Day VWAP | Rank Full Day VWAP | | | | | |
| | (\$) | | (cps) | (cps) | (cps) | (cps) | (cps) | (cps) | (Rank) | | | |
| Mid Cap | 35.78 % | 2,778 | +2.71 | +2.33 | 2.15 | +0.94 | 94 % | +0.55 | 2.71 | 57 | 0.57 | \$1 B TO \$5 B |
| Giant Cap | 31.71 % | 2,511 | +1.52 | +2.33 | +5.41 | +1.71 | 20 % | +6.93 | +2.89 | 51 | 0.65 | Over \$25 B |
| Large Cap | 26.23 % | 1,469 | +1.89 | +2.33 | 2.44 | +1.39 | 88 % | 0.55 | 4.27 | 51 | 0.66 | \$5 B TO \$25 B |
| Small Cap | 5.95 % | 2,336 | +2.68 | +2.33 | 3.37 | +0.66 | 93 % | 0.69 | 3.68 | 62 | 0.49 | \$250 M TO \$1 B |
| N.A. | 0.34 % | 2,024 | +3.96 | +2.33 | +6.46 | +1.32 | 5 % | +10.42 | +6.77 | 51 | 0.65 | |
| Micro Cap | 0.00 % | 36 | +0.00 | +2.33 | +28.44 | +0.68 | 1 % | +28.44 | +25.43 | 32 | 0.97 | Under \$250 M |

Total Cost by Market Cap: (USD)

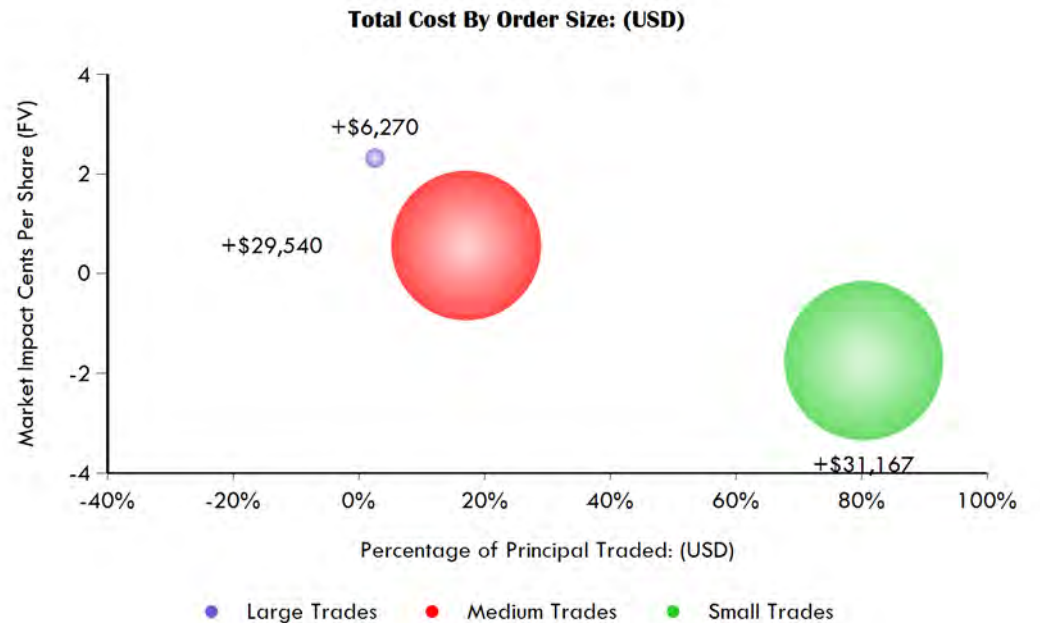
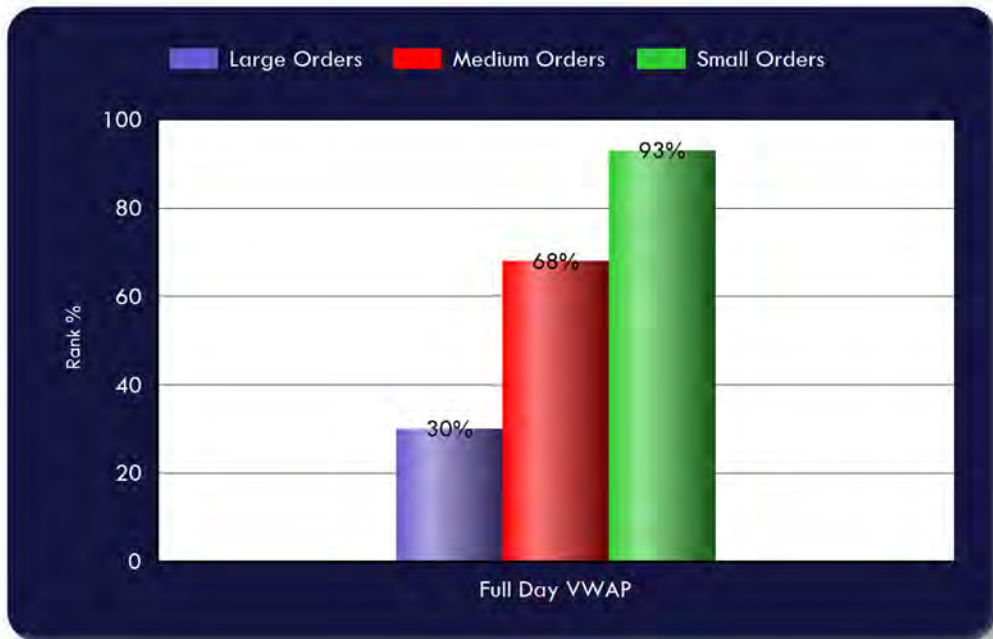


(+) = Cost

EXECUTIVE SUMMARY

ORDER SIZE EVALUATION

| Order Size | Total # Of Orders | Avg. Shares Per Order | Avg. Order Completion Time (min) | COMMISSION | | MARKET IMPACT | | | Total Cost | Total Cost/Savings | E - Score (Rank) | E - Score | Absolute Size (Shares) |
|--------------|-------------------|-----------------------|----------------------------------|-----------------------|----------------------------|---------------------|------------------------------|--------------------|------------|---|------------------|-----------|------------------------|
| | | | | Your Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Universe Full Day VWAP (cps) | Rank Full Day VWAP | (cps) | Commission+Full Day VWAP Vs. Universe (cps) | | | |
| Large Orders | 3 | 55,780 | N/A | +1.43 | +2.33 | +2.32 | +1.32 | 30 % | +3.75 | +0.10 | 74 | 0.34 | 50K or More |
| Med. Orders | 76 | 16,830 | N/A | +1.73 | +2.33 | +0.55 | +1.32 | 68 % | +2.28 | 1.37 | 45 | 0.75 | 10K-50K |
| Small Orders | 2,275 | 1,681 | N/A | +2.56 | +2.33 | 1.73 | +1.32 | 93 % | +0.82 | 2.82 | 55 | 0.60 | 10K or Less |





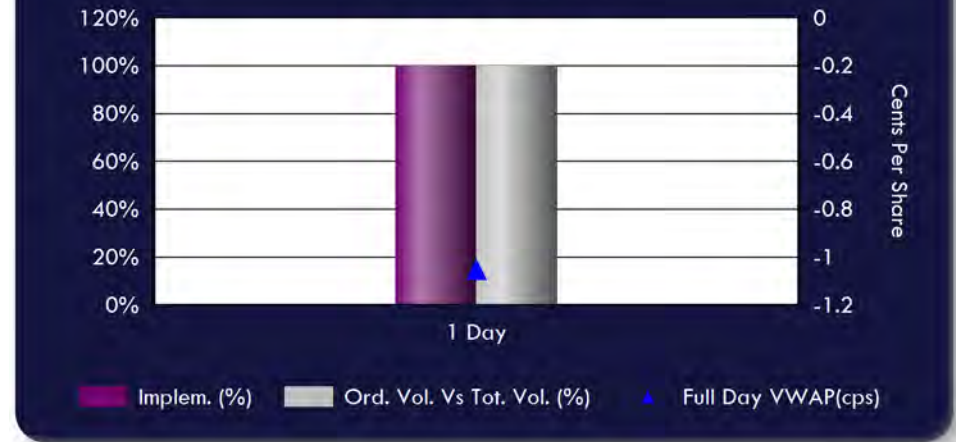
(+) = Cost

EXECUTIVE SUMMARY

IMPLEMENTATION DAYS BY TRADE

| Period | Percent Traded (%) | Order Vol. Vs Total Vol. (%) | Full Day VWAP (cps) | E - Score (Rank) | E - Score |
|--------|--------------------|------------------------------|---------------------|------------------|-----------|
| 1 Day | 100.00 | 100% | 1.05 | 54 | 0.62 |

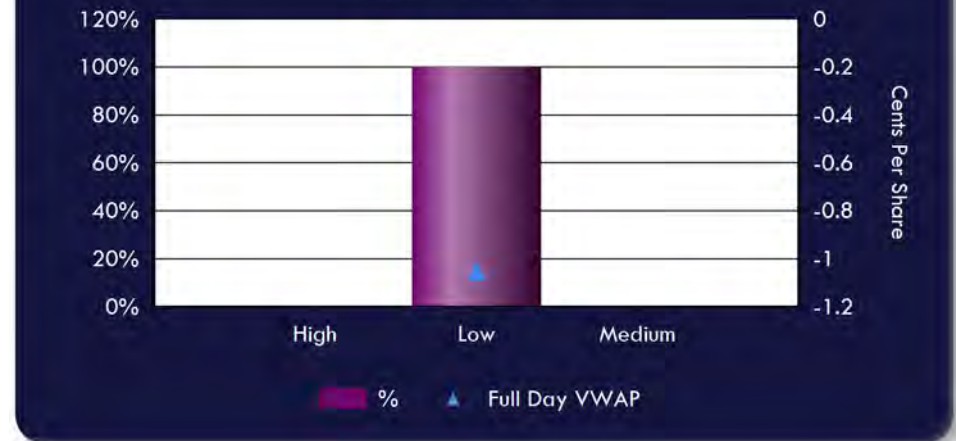
Implementation Days



TRADE DIFFICULTY

| Methodology | Liquid. Cat. | Percent Traded (%) | Full Day VWAP (cps) | E - Score (Rank) | E - Score |
|----------------------|--------------|--------------------|---------------------|------------------|-----------|
| 0%~20% of daily vol. | L | 100% | 1.05 | 54 | 0.62 |

Avg. % of Daily Volume



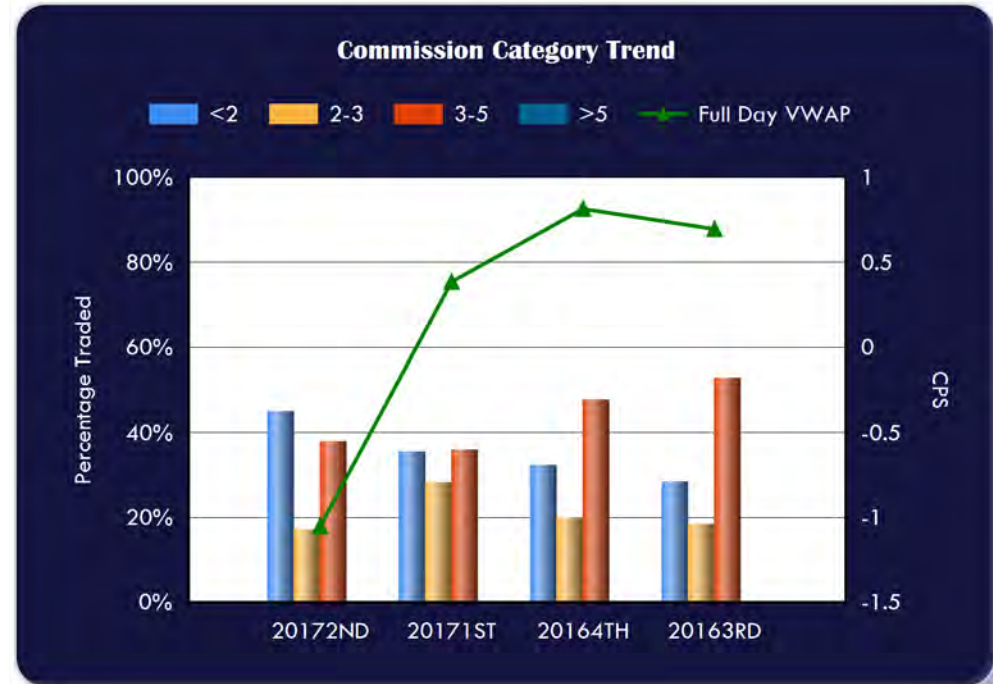


(+) = Cost

EXECUTIVE SUMMARY

COMMISSION REVIEW

| Top 10 Broker | | | | | Commission Trends | | |
|---------------|-----------------------|--------------------------|----------------------------|------------------------|-------------------|---------------|---------------|
| Broker | Total Commission (\$) | Commission 20172nd (cps) | All Trading Universe (cps) | Bundled Universe (cps) | 20171ST (cps) | 20164TH (cps) | 20163RD (cps) |
| CAPITAL IN | 16,236 | +3.24 | +2.33 | +3.59 | +3.42 | +3.60 | +3.41 |
| LIQUIDNET | 12,873 | +2.60 | +2.33 | +3.59 | +2.74 | +2.96 | +3.08 |
| ITG | 11,828 | +3.30 | +2.33 | +3.59 | +3.72 | +3.87 | +3.83 |
| CONVERGEX | 10,135 | +4.11 | +2.33 | +3.59 | +4.45 | +4.94 | +4.88 |
| MERRILL LY | 5,010 | +2.85 | +2.33 | +3.59 | +1.69 | +2.49 | +2.06 |
| THEMIS TRA | 4,949 | +1.71 | +2.33 | +3.59 | N.A | +4.00 | +4.00 |
| JP MORGAN | 4,490 | +0.39 | +2.33 | +3.59 | +3.19 | +3.34 | +3.64 |
| CITIGROUP | 3,991 | +2.25 | +2.33 | +3.59 | N.A | +3.11 | +3.00 |
| STIFEL NIC | 3,866 | +3.45 | +2.33 | +3.59 | N.A | +3.34 | +3.59 |
| GOLDMAN SA | 3,768 | +2.25 | +2.33 | +3.59 | N.A | +2.27 | +2.42 |



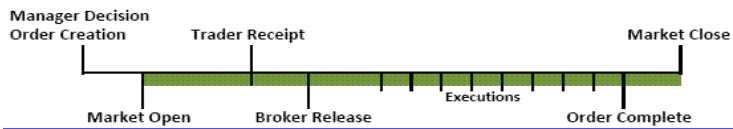
NOTES

Blank area for notes.

(+) = Cost

TRADE CYCLE DETAIL

Manager Performance (Full Day VWAP)



| Manager | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| ALLIANCE R 3000 CAPI | 44 | 1,374 | 1,052,317 | 29 | 1.02 | +0.01 | +2.33 | 3.67 | 96 % | 7.31 | 80 | 16 | 86 |
| WEATHERBIE | 30 | 3,454 | 918,765 | 62 | 0.50 | +2.84 | +2.33 | +1.89 | 37 % | +1.09 | 84 | 62 | 33 |
| BROWN ADVISORY | 28 | 1,567 | 322,845 | 67 | 0.43 | +2.66 | +2.33 | +2.24 | 31 % | +1.25 | 77 | 99 | 31 |
| CENTERSQUARE | 27 | 1,989 | 888,924 | 47 | 0.71 | +2.95 | +2.33 | 0.81 | 90 % | 1.51 | 68 | - | - |
| DALTON, GREINER, HAR | 27 | 2,673 | 908,863 | 66 | 0.44 | +4.10 | +2.33 | 1.42 | 92 % | 0.96 | 94 | 25 | 90 |
| EAGLE CAPITAL MANAGE | 14 | 26,385 | 263,850 | 68 | 0.41 | +2.61 | +2.33 | +4.39 | 10 % | +3.35 | 99 | 99 | 1 |
| HUBER CAPITAL MANAGE | 12 | 3,688 | 331,926 | 65 | 0.45 | +0.64 | +2.33 | 1.09 | 91 % | 4.10 | 46 | 56 | 98 |
| UBS GLOBAL ASSET MGM | 12 | 3,060 | 385,608 | 57 | 0.57 | +2.35 | +2.33 | 7.17 | 98 % | 8.47 | 22 | 4 | 34 |
| WEDGE CAPITAL MGMT L | 6 | 1,929 | 198,702 | 73 | 0.34 | +3.06 | +2.33 | 0.81 | 90 % | 1.40 | 49 | 91 | 24 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) |
|------------------|-------------|----------------|---------|---------------------|
| Bundled | All Trading | Execution Only | Program | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | +1.32 |

NOTES

| |
|--|
| |
|--|

(+) = Cost

TRADE CYCLE DETAIL

Broker Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score | E - Score Rank | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|--------------------|----------------------------|------------------|--------------|-----------|----------------|------------------|----------------------------|----------------------------|---------------------|--------------------|--------------------|---|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) |
| JP MORGAN CHASE | 47 | 1,373 | 1,143,542 | 33 | 0.96 | 4,490 | +0.39 | +2.33 | 5.94 | 98 % | 9.19 | 80 | 92 | 94 |
| CAPITAL INSTL SVCS | 27 | 4,918 | 501,641 | 64 | 0.47 | 16,236 | +3.24 | +2.33 | +3.02 | 21 % | +2.61 | 96 | 73 | 24 |
| LIQUIDNET | 15 | 2,172 | 495,156 | 57 | 0.57 | 12,873 | +2.60 | +2.33 | +2.33 | 30 % | +1.29 | 94 | 99 | 90 |
| ITG | 13 | 3,285 | 358,082 | 67 | 0.43 | 11,828 | +3.30 | +2.33 | +2.03 | 34 % | +1.69 | 46 | 28 | 53 |
| UBS | 10 | 2,914 | 230,220 | 66 | 0.45 | 2,821 | +1.23 | +2.33 | 0.40 | 85 % | 2.82 | 71 | 14 | 96 |
| THEMIS TRADING LLC | 9 | 3,217 | 289,531 | 62 | 0.50 | 4,949 | +1.71 | +2.33 | +0.84 | 59 % | 1.09 | 50 | 41 | 4 |
| CONVERGEX | 7 | 2,088 | 246,426 | 68 | 0.42 | 10,135 | +4.11 | +2.33 | 0.88 | 91 % | 0.41 | 91 | 82 | 92 |
| MERRILL LYNCH | 6 | 2,478 | 175,934 | 52 | 0.64 | 5,010 | +2.85 | +2.33 | 5.75 | 98 % | 6.54 | 27 | 5 | 65 |
| MORGAN STANLEY | 5 | 2,506 | 100,255 | 35 | 0.91 | 1,308 | +1.30 | +2.33 | +29.09 | 1 % | +26.75 | 50 | 94 | 24 |
| GOLDMAN SACHS | 5 | 3,556 | 167,134 | 50 | 0.67 | 3,768 | +2.25 | +2.33 | 11.99 | 99 % | 13.38 | 93 | 93 | 95 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) |
|------------------|-------------|----------------|---------|---------------------|
| Bundled | All Trading | Execution Only | Program | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | +1.32 |

NOTES

| |
|--|
| |
|--|

(+) = Cost

TRADE CYCLE DETAIL

Broker Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| CITIGROUP | 5 | 3,406 | 177,127 | 52 | 0.63 | 3,991 | +2.25 | +2.33 | +1.81 | 39 % | +0.42 | 18 | 92 | 20 |
| SC BERNSTEIN | 5 | 2,406 | 115,501 | 64 | 0.47 | 1,750 | +1.52 | +2.33 | 11.34 | 99 % | 13.47 | 1 | 99 | 95 |
| STIFEL NICOLAUS & CO | 4 | 2,872 | 112,004 | 62 | 0.50 | 3,866 | +3.45 | +2.33 | 4.34 | 97 % | 4.54 | 7 | 87 | 70 |
| COWEN & CO | 3 | 2,584 | 77,510 | 54 | 0.61 | 2,501 | +3.23 | +2.33 | 5.40 | 97 % | 5.82 | 37 | 91 | 6 |
| WILLIAM BLAIR | 3 | 2,251 | 72,030 | 59 | 0.54 | 2,753 | +3.82 | +2.33 | 1.84 | 93 % | 1.66 | 19 | 97 | 34 |
| STEPHENS & CO INC | 2 | 2,352 | 68,220 | 67 | 0.43 | 2,935 | +4.30 | +2.33 | +0.72 | 63 % | +1.37 | 50 | 2 | 26 |
| JEFFERIES & CO | 2 | 3,373 | 91,065 | 60 | 0.52 | 2,915 | +3.20 | +2.33 | +3.36 | 17 % | +2.91 | 98 | 91 | 17 |
| WELLS FARGO | 2 | 2,305 | 66,844 | 50 | 0.67 | 2,628 | +3.93 | +2.33 | 2.04 | 94 % | 1.75 | 20 | 84 | 45 |
| KEYBANC | 2 | 1,705 | 42,636 | 73 | 0.34 | 1,736 | +4.07 | +2.33 | 0.81 | 90 % | 0.39 | 84 | 63 | 92 |
| PIPER JAFFRAY | 2 | 6,656 | 39,937 | 72 | 0.35 | 1,651 | +4.13 | +2.33 | +16.49 | 1 % | +16.97 | 29 | 84 | 96 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) |
|------------------|-------------|----------------|---------|---------------------|
| Bundled | All Trading | Execution Only | Program | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | +1.32 |

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(+) = Cost

TRADE CYCLE DETAIL

Broker Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|---------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| BROADCORT CAPITAL | 2 | 1,556 | 28,009 | 71 | 0.37 | 817 | +2.92 | +2.33 | 8.51 | 98 % | 9.24 | 27 | 94 | 4 |
| BAIRD, ROBERT W | 2 | 1,337 | 25,399 | 54 | 0.61 | 955 | +3.76 | +2.33 | +2.19 | 32 % | +2.31 | 92 | 77 | 99 |
| WEEDEN & CO | 2 | 2,454 | 110,426 | 74 | 0.33 | 3,286 | +2.98 | +2.33 | 1.64 | 92 % | 2.31 | 90 | 94 | 79 |
| CREDIT SUISSE | 1 | 2,455 | 31,914 | 66 | 0.44 | 679 | +2.13 | +2.33 | +7.71 | 3 % | +6.19 | 15 | 22 | 85 |
| LUMINEX TRADING | 1 | 869 | 14,772 | 65 | 0.46 | 44 | +0.30 | +2.33 | +12.12 | 1 % | +8.78 | 98 | 96 | 91 |
| RBC CAPITAL MARKETS | 1 | 1,706 | 42,642 | 75 | 0.32 | 1,374 | +3.22 | +2.33 | 3.87 | 97 % | 4.29 | 21 | 9 | 60 |
| BARCLAYS | 1 | 1,863 | 29,808 | 71 | 0.38 | 1,065 | +3.57 | +2.33 | 2.59 | 95 % | 2.67 | 45 | 91 | 90 |
| RAYMOND JAMES | 1 | 1,111 | 24,432 | 69 | 0.40 | 741 | +3.03 | +2.33 | 0.30 | 85 % | 0.92 | 93 | 81 | 17 |
| NEEDHAM & CO INC | <1 | 3,099 | 30,987 | 24 | 1.14 | 479 | +1.55 | +2.33 | 16.08 | 99 % | 18.18 | 95 | 99 | 80 |
| CANACCORD GENUITY | <1 | 2,937 | 23,499 | 58 | 0.55 | 842 | +3.58 | +2.33 | +1.81 | 39 % | +1.75 | 99 | 93 | 99 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) |
|------------------|-------------|----------------|---------|---------------------|
| Bundled | All Trading | Execution Only | Program | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | +1.32 |

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(+) = Cost

TRADE CYCLE DETAIL

Broker Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| BTIG LLC | <1 | 2,691 | 16,148 | 53 | 0.62 | 323 | +2.00 | +2.33 | 0.82 | 90 % | 2.46 | 98 | 99 | 1 |
| KEEFE BRUYETTE WOODS | <1 | 2,363 | 18,905 | 77 | 0.30 | 772 | +4.08 | +2.33 | 3.08 | 95 % | 2.64 | 93 | 87 | 70 |
| KING, CL, & ASSOC | <1 | 2,148 | 23,630 | 71 | 0.37 | 1,063 | +4.50 | +2.33 | 1.42 | 92 % | 0.56 | - | 93 | 98 |
| SANDLER ONEILL | <1 | 1,132 | 18,116 | 66 | 0.44 | 731 | +4.04 | +2.33 | 2.47 | 95 % | 2.08 | - | 93 | - |
| DAVIDSON D.A. & CO | <1 | 1,875 | 11,248 | 77 | 0.29 | 506 | +4.50 | +2.33 | 2.91 | 95 % | 2.06 | - | 15 | 91 |
| ISI GROUP INC | <1 | 2,285 | 13,707 | 44 | 0.76 | 501 | +3.66 | +2.33 | +2.68 | 24 % | +2.69 | 5 | 97 | 41 |
| OPPENHEIMER & CO INC | <1 | 3,099 | 9,297 | 55 | 0.59 | 330 | +3.55 | +2.33 | +11.16 | 1 % | +11.06 | 95 | 1 | 80 |
| GREEN STREET | <1 | 1,814 | 14,512 | 51 | 0.65 | 633 | +4.37 | +2.33 | 2.98 | 95 % | 2.26 | 96 | 6 | 5 |
| CRAIG - HALLUM | <1 | 8,948 | 35,791 | 57 | 0.56 | 1,288 | +3.60 | +2.33 | +0.84 | 59 % | +0.80 | 96 | 2 | - |
| WUNDERLICH SECUR | <1 | 4,500 | 4,500 | 86 | 0.17 | 225 | +5.00 | +2.33 | +3.47 | 15 % | +4.82 | 18 | 99 | 54 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) |
|------------------|-------------|----------------|---------|---------------------|
| Bundled | All Trading | Execution Only | Program | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | +1.32 |

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(+) = Cost

TRADE CYCLE DETAIL

Broker Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| IMPERIAL CAPITAL LLC | <1 | 4,435 | 4,435 | 74 | 0.33 | 222 | +5.00 | +2.33 | +23.56 | 1 % | +24.91 | - | - | - |
| JOHNSON RICE & CO | <1 | 18,950 | 18,950 | 48 | 0.70 | 758 | +4.00 | +2.33 | 29.70 | 99 % | 29.35 | - | - | - |
| LEERINK SWANN | <1 | 1,550 | 6,198 | 73 | 0.34 | 239 | +3.85 | +2.33 | 6.54 | 98 % | 6.33 | 98 | 86 | 88 |
| WOLFE TRAHAN SECS | <1 | 1,079 | 6,473 | 68 | 0.41 | 324 | +5.00 | +2.33 | 4.53 | 97 % | 3.18 | - | 63 | - |
| STATE STREET BANK | <1 | 2,289 | 9,157 | 75 | 0.32 | 46 | +0.50 | +2.33 | +2.50 | 27 % | 0.65 | 7 | 28 | 22 |
| HIBERNIA SOUTHCOAST | <1 | 2,853 | 5,705 | 81 | 0.24 | 285 | +5.00 | +2.33 | +8.08 | 2 % | +9.43 | 99 | - | - |
| CJS SECURITIES | <1 | 1,200 | 3,600 | 62 | 0.49 | 180 | +5.00 | +2.33 | 14.66 | 99 % | 13.31 | 99 | 99 | - |
| JONES TRADING | <1 | 4,171 | 8,342 | 62 | 0.50 | 146 | +1.75 | +2.33 | +5.81 | 6 % | +3.91 | 83 | 99 | 68 |
| NORTHLAND SECURITIES | <1 | 5,815 | 11,630 | 72 | 0.36 | 465 | +4.00 | +2.33 | +5.81 | 6 % | +6.16 | - | - | - |
| CANTOR FITZGERALD | <1 | 2,850 | 5,700 | 49 | 0.68 | 200 | +3.50 | +2.33 | +13.28 | 1 % | +13.13 | 99 | 1 | 31 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) |
|------------------|-------------|----------------|---------|---------------------|
| Bundled | All Trading | Execution Only | Program | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | +1.32 |

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TRADE CYCLE DETAIL

Broker Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|---------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| CITATION FINL GROUP | <1 | 5,217 | 5,217 | 63 | 0.48 | 26 | +0.50 | +2.33 | +15.74 | 1 % | +12.60 | 78 | 95 | - |
| ANCORA SECIRITIES | <1 | 5,600 | 5,600 | 80 | 0.25 | 252 | +4.50 | +2.33 | +6.33 | 5 % | +7.18 | - | 13 | - |
| TELSEY ADVISORY GR | <1 | 4,366 | 8,732 | 76 | 0.30 | 342 | +3.92 | +2.33 | 8.21 | 98 % | 7.94 | 10 | 99 | 98 |
| SEAPORT GROUP SECS | <1 | 1,986 | 11,913 | 29 | 1.03 | 481 | +4.03 | +2.33 | 8.05 | 98 % | 7.67 | 92 | 95 | - |
| KNIGHT CAPITAL | <1 | 9,900 | 19,800 | 27 | 1.07 | 396 | +2.00 | +2.33 | +7.91 | 3 % | +6.26 | - | 22 | 69 |
| MAXIM GROUP | <1 | 15,900 | 15,900 | 55 | 0.59 | 557 | +3.50 | +2.33 | 9.32 | 98 % | 9.47 | 90 | 99 | 8 |
| BLOOMBERG | <1 | 1,004 | 1,004 | 69 | 0.40 | 20 | +2.00 | +2.33 | +133.22 | 1 % | +131.57 | - | 99 | 1 |
| MKM PARTNERS | <1 | 1,997 | 11,980 | 82 | 0.23 | 215 | +1.79 | +2.33 | 1.09 | 91 % | 2.95 | - | - | 99 |
| APEX CLEARING CORP | <1 | 1,255 | 5,021 | 40 | 0.83 | 100 | +2.00 | +2.33 | +15.99 | 1 % | +14.34 | 6 | 1 | - |
| MIZUHO | <1 | 1,585 | 3,170 | 63 | 0.48 | 159 | +5.00 | +2.33 | +4.42 | 9 % | +5.78 | - | - | 85 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) |
|------------------|-------------|----------------|---------|---------------------|
| Bundled | All Trading | Execution Only | Program | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | +1.32 |

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TRADE CYCLE DETAIL

Broker Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| LOOP CAPITAL MARKETS | <1 | 1,213 | 2,426 | 46 | 0.73 | 109 | +4.50 | +2.33 | +20.12 | 1 % | +20.98 | - | - | - |
| BMO CAPITAL MARKETS | <1 | 335 | 670 | 32 | 0.98 | 34 | +5.00 | +2.33 | 15.10 | 99 % | 13.75 | - | - | 96 |
| DEUTSCHE BANK | <1 | 1,640 | 1,640 | 19 | 1.26 | 66 | +4.00 | +2.33 | 8.83 | 98 % | 8.48 | 98 | 99 | 93 |

ELKINS/MCSHERRY UNIVERSE VALUES

| Commission (cps) | | | | Market Impact (cps) |
|------------------|-------------|----------------|---------|---------------------|
| Bundled | All Trading | Execution Only | Program | Full Day VWAP |
| +3.59 | +2.33 | +1.45 | +1.60 | +1.32 |

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(+) = Cost

TRADE CYCLE DETAIL

ALLIANCE R 3000 CAPITAL MANAGEM Performance (Full Day VWAP)

| | | | | | | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|---------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|--------------|--------------|
| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 2017 1ST (%) | 2016 4TH (%) | 2016 3RD (%) |
| Grand Total | 44 | 1,374 | 1,052,317 | 29 | 1.02 | 53 | +0.01 | +2.33 | 3.67 | 96 % | 7.31 | 80 | 16 | 86 |
| JP MORGAN CHASE | 42 | 1,315 | 1,002,209 | 31 | 1.00 | 0 | +0.00 | +2.33 | 6.76 | 98 % | 10.41 | 98 | 12 | - |
| MORGAN STANLEY | 2 | 39,585 | 39,585 | 11 | 1.56 | 0 | +0.00 | +2.33 | +73.72 | 1 % | +70.07 | - | - | 1 |
| CITATION FINL GROUP | <1 | 5,217 | 5,217 | 63 | 0.48 | 26 | +0.50 | +2.33 | +15.74 | 1 % | +12.60 | 78 | 95 | - |
| GOLDMAN SACHS | <1 | 2,653 | 5,306 | 34 | 0.93 | 27 | +0.50 | +2.33 | 16.66 | 99 % | 19.81 | 2 | 99 | - |



(+) = Cost

TRADE CYCLE DETAIL

BROWN ADVISORY Performance (Full Day VWAP)

| | | | | | | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| Grand Total | 28 | 1,567 | 322,845 | 67 | 0.43 | 8,588 | +2.66 | +2.33 | +2.24 | 31 % | +1.25 | 77 | 99 | 31 |
| CAPITAL INSTL SVCS | 11 | 2,153 | 137,805 | 71 | 0.38 | 3,616 | +2.62 | +2.33 | +1.45 | 48 % | +0.43 | 34 | 99 | 10 |
| SC BERNSTEIN | 3 | 848 | 22,886 | 62 | 0.49 | 465 | +2.03 | +2.33 | 0.56 | 88 % | 2.17 | 1 | 99 | 95 |
| MORGAN STANLEY | 2 | 1,372 | 20,579 | 65 | 0.46 | 316 | +1.54 | +2.33 | +3.14 | 19 % | +1.03 | 69 | 99 | 91 |
| STIFEL NICOLAUS & CO | 2 | 2,231 | 17,849 | 59 | 0.53 | 625 | +3.50 | +2.33 | 0.65 | 88 % | 0.79 | 81 | 91 | 97 |
| LUMINEX TRADING | 1 | 916 | 14,662 | 65 | 0.46 | 44 | +0.30 | +2.33 | +12.17 | 1 % | +8.82 | 98 | 96 | 91 |
| BAIRD, ROBERT W | 1 | 674 | 8,093 | 52 | 0.63 | 283 | +3.50 | +2.33 | +9.31 | 1 % | +9.16 | 98 | 89 | 32 |
| UBS | 1 | 1,503 | 10,524 | 71 | 0.37 | 368 | +3.50 | +2.33 | 9.31 | 98 % | 9.46 | 99 | - | 67 |
| BTIG LLC | <1 | 2,691 | 16,148 | 53 | 0.62 | 323 | +2.00 | +2.33 | 0.82 | 90 % | 2.46 | 98 | 99 | 1 |
| KEYBANC | <1 | 1,086 | 6,516 | 83 | 0.22 | 228 | +3.50 | +2.33 | +2.95 | 22 % | +2.80 | - | 97 | - |
| CREDIT SUISSE | <1 | 1,648 | 8,238 | 70 | 0.38 | 288 | +3.50 | +2.33 | +32.79 | 1 % | +32.65 | 99 | 7 | 88 |
| JEFFERIES & CO | <1 | 2,121 | 8,483 | 45 | 0.75 | 297 | +3.50 | +2.33 | +17.85 | 1 % | +17.71 | 96 | 1 | 46 |
| RAYMOND JAMES | <1 | 1,929 | 11,574 | 85 | 0.18 | 405 | +3.50 | +2.33 | 0.55 | 88 % | 0.69 | 99 | 1 | 90 |
| MERRILL LYNCH | <1 | 2,205 | 6,615 | 57 | 0.57 | 232 | +3.50 | +2.33 | 4.83 | 97 % | 4.98 | 91 | - | - |
| CANACCORD GENUITY | <1 | 1,402 | 4,206 | 56 | 0.58 | 147 | +3.50 | +2.33 | 3.94 | 97 % | 4.09 | - | - | - |
| WELLS FARGO | <1 | 1,388 | 2,776 | 78 | 0.29 | 97 | +3.50 | +2.33 | +12.90 | 1 % | +12.75 | - | 96 | 92 |
| BARCLAYS | <1 | 867 | 4,335 | 75 | 0.31 | 152 | +3.50 | +2.33 | 4.92 | 97 % | 5.06 | 95 | 96 | 71 |
| CITIGROUP | <1 | 1,562 | 7,809 | 75 | 0.32 | 273 | +3.50 | +2.33 | 2.71 | 95 % | 2.85 | - | 99 | 56 |
| WILLIAM BLAIR | <1 | 331 | 331 | 60 | 0.53 | 12 | +3.50 | +2.33 | 352.66 | 99 % | 352.81 | 59 | 99 | 1 |
| ITG | <1 | 2,096 | 2,096 | 95 | 0.07 | 42 | +2.00 | +2.33 | 12.79 | 99 % | 14.43 | 98 | 1 | 7 |
| LEERINK SWANN | <1 | 605 | 1,814 | 64 | 0.47 | 64 | +3.50 | +2.33 | 29.11 | 99 % | 29.26 | - | - | - |



(+) = Cost

TRADE CYCLE DETAIL

BROWN ADVISORY Performance (Full Day VWAP)

| | | | | | | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| KEEFE BRUYETTE WOODS | <1 | 2,303 | 2,303 | 100 | 0.00 | 81 | +3.50 | +2.33 | 0.01 | 81 % | 0.15 | - | - | - |
| ISI GROUP INC | <1 | 1,464 | 2,928 | 25 | 1.11 | 102 | +3.50 | +2.33 | +10.58 | 1 % | +10.44 | 2 | 99 | 99 |
| BLOOMBERG | <1 | 1,004 | 1,004 | 69 | 0.40 | 20 | +2.00 | +2.33 | +133.22 | 1 % | +131.57 | - | 99 | 1 |
| JP MORGAN CHASE | <1 | 699 | 1,398 | 61 | 0.51 | 42 | +3.01 | +2.33 | +2.19 | 32 % | +1.56 | 99 | 90 | 97 |
| PIPER JAFFRAY | <1 | 1,873 | 1,873 | 48 | 0.70 | 66 | +3.50 | +2.33 | 5.93 | 98 % | 6.07 | - | - | - |



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TRADE CYCLE DETAIL

CENTERSQUARE Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| Grand Total | 27 | 1,989 | 888,924 | 47 | 0.71 | 26,234 | +2.95 | +2.33 | 0.81 | 90 % | 1.51 | 68 | - | - |
| LIQUIDNET | 10 | 1,829 | 309,034 | 55 | 0.59 | 7,764 | +2.51 | +2.33 | +1.03 | 56 % | 0.11 | 94 | - | - |
| CITIGROUP | 2 | 3,049 | 106,718 | 38 | 0.86 | 3,593 | +3.37 | +2.33 | +1.99 | 34 % | +1.71 | 7 | - | - |
| GOLDMAN SACHS | 2 | 3,226 | 70,967 | 57 | 0.56 | 2,756 | +3.88 | +2.33 | 1.76 | 93 % | 1.52 | 87 | - | - |
| JP MORGAN CHASE | 2 | 1,293 | 38,786 | 42 | 0.79 | 1,769 | +4.56 | +2.33 | +1.17 | 54 % | +2.08 | 65 | - | - |
| WELLS FARGO | 2 | 2,373 | 64,068 | 43 | 0.77 | 2,531 | +3.95 | +2.33 | 2.69 | 95 % | 2.38 | 12 | - | - |
| MERRILL LYNCH | 2 | 3,885 | 66,050 | 28 | 1.05 | 490 | +0.74 | +2.33 | 14.77 | 99 % | 17.68 | 99 | - | - |
| ITG | 1 | 1,451 | 40,641 | 47 | 0.71 | 1,183 | +2.91 | +2.33 | 2.58 | 95 % | 3.32 | 81 | - | - |
| UBS | 1 | 1,444 | 18,770 | 43 | 0.78 | 745 | +3.97 | +2.33 | +11.00 | 1 % | +11.33 | 20 | - | - |
| STIFEL NICOLAUS & CO | 1 | 3,328 | 46,590 | 44 | 0.76 | 1,267 | +2.72 | +2.33 | 2.73 | 95 % | 3.65 | 5 | - | - |
| CAPITAL INSTL SVCS | <1 | 1,846 | 22,150 | 34 | 0.94 | 911 | +4.11 | +2.33 | +10.53 | 1 % | +10.99 | 82 | - | - |
| MORGAN STANLEY | <1 | 1,466 | 27,856 | 61 | 0.51 | 633 | +2.27 | +2.33 | 3.75 | 97 % | 5.13 | 50 | - | - |
| RAYMOND JAMES | <1 | 804 | 12,858 | 50 | 0.66 | 336 | +2.61 | +2.33 | 0.08 | 81 % | 1.12 | 16 | - | - |
| KEYBANC | <1 | 1,069 | 12,822 | 53 | 0.62 | 490 | +3.83 | +2.33 | +0.92 | 57 % | +1.10 | 90 | - | - |
| GREEN STREET | <1 | 1,814 | 14,512 | 51 | 0.65 | 633 | +4.37 | +2.33 | 2.98 | 95 % | 2.26 | 96 | - | - |
| BAIRD, ROBERT W | <1 | 1,170 | 3,510 | 29 | 1.03 | 176 | +5.00 | +2.33 | 21.52 | 99 % | 20.16 | 15 | - | - |
| JEFFERIES & CO | <1 | 2,825 | 11,300 | 65 | 0.45 | 247 | +2.19 | +2.33 | +2.66 | 24 % | +1.20 | 91 | - | - |
| ISI GROUP INC | <1 | 823 | 2,470 | 31 | 0.99 | 66 | +2.68 | +2.33 | 3.51 | 96 % | 4.48 | 11 | - | - |
| MKM PARTNERS | <1 | 1,896 | 9,480 | 75 | 0.31 | 190 | +2.00 | +2.33 | 1.23 | 91 % | 2.88 | - | - | - |
| MIZUHO | <1 | 1,585 | 3,170 | 63 | 0.48 | 159 | +5.00 | +2.33 | +4.42 | 9 % | +5.78 | - | - | - |
| BARCLAYS | <1 | 1,810 | 3,620 | 16 | 1.37 | 148 | +4.09 | +2.33 | 4.69 | 97 % | 4.25 | 38 | - | - |



(+) = Cost

TRADE CYCLE DETAIL

CENTERSQUARE Performance (Full Day VWAP)

| | | | | | | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|---------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| BMO CAPITAL MARKETS | <1 | 335 | 670 | 32 | 0.98 | 34 | +5.00 | +2.33 | 15.10 | 99 % | 13.75 | - | - | - |
| DEUTSCHE BANK | <1 | 1,640 | 1,640 | 19 | 1.26 | 66 | +4.00 | +2.33 | 8.83 | 98 % | 8.48 | 98 | - | - |
| CREDIT SUISSE | <1 | 566 | 1,132 | 53 | 0.62 | 48 | +4.26 | +2.33 | 0.72 | 89 % | 0.11 | 2 | - | - |
| LUMINEX TRADING | <1 | 110 | 110 | 82 | 0.23 | 0 | +0.25 | +2.33 | +5.67 | 6 % | +2.28 | 92 | - | - |



(+) = Cost

TRADE CYCLE DETAIL

DALTON, GREINER, HARTMAN, MAHER Performance (Full Day VWAP)

| | | | | | | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| Grand Total | 27 | 2,673 | 908,863 | 66 | 0.44 | 37,265 | +4.10 | +2.33 | 1.42 | 92 % | 0.96 | 94 | 25 | 90 |
| CONVERGEX | 7 | 2,088 | 246,426 | 68 | 0.42 | 10,135 | +4.11 | +2.33 | 0.88 | 91 % | 0.41 | 91 | 82 | 90 |
| CAPITAL INSTL SVCS | 3 | 7,637 | 129,836 | 55 | 0.60 | 5,353 | +4.12 | +2.33 | 0.58 | 88 % | 0.10 | 99 | 55 | 80 |
| LIQUIDNET | 3 | 2,064 | 88,755 | 58 | 0.55 | 3,550 | +4.00 | +2.33 | +5.64 | 6 % | +6.00 | 90 | 99 | 8 |
| STEPHENS & CO INC | 2 | 2,518 | 52,880 | 65 | 0.46 | 2,380 | +4.50 | +2.33 | 1.17 | 91 % | 0.32 | 96 | 16 | 60 |
| WEEDEN & CO | 1 | 2,565 | 71,817 | 73 | 0.34 | 2,514 | +3.50 | +2.33 | 1.82 | 93 % | 1.96 | 93 | 97 | 83 |
| RBC CAPITAL MARKETS | 1 | 2,332 | 32,642 | 78 | 0.27 | 1,024 | +3.14 | +2.33 | 1.54 | 92 % | 2.05 | 22 | 39 | 57 |
| COWEN & CO | <1 | 2,050 | 18,450 | 57 | 0.56 | 874 | +4.73 | +2.33 | 23.58 | 99 % | 22.49 | - | - | - |
| WILLIAM BLAIR | <1 | 1,660 | 23,236 | 70 | 0.38 | 997 | +4.29 | +2.33 | 1.64 | 92 % | 1.00 | 43 | 98 | 80 |
| KEYBANC | <1 | 3,328 | 23,298 | 75 | 0.32 | 1,018 | +4.37 | +2.33 | 2.82 | 95 % | 2.10 | 33 | 96 | 90 |
| KING, CL, & ASSOC | <1 | 2,148 | 23,630 | 71 | 0.37 | 1,063 | +4.50 | +2.33 | 1.42 | 92 % | 0.56 | - | 93 | 99 |
| STIFEL NICOLAUS & CO | <1 | 3,142 | 28,277 | 77 | 0.30 | 1,235 | +4.37 | +2.33 | 3.71 | 96 % | 2.99 | - | 99 | - |
| DAVIDSON D.A. & CO | <1 | 1,875 | 11,248 | 77 | 0.29 | 506 | +4.50 | +2.33 | 2.91 | 95 % | 2.06 | - | 15 | 91 |
| KEEFE BRUYETTE WOODS | <1 | 3,667 | 11,002 | 68 | 0.41 | 495 | +4.50 | +2.33 | 7.35 | 98 % | 6.50 | - | 68 | 70 |
| WUNDERLICH SECUR | <1 | 4,500 | 4,500 | 86 | 0.17 | 225 | +5.00 | +2.33 | +3.47 | 15 % | +4.82 | 1 | 94 | 54 |
| IMPERIAL CAPITAL LLC | <1 | 4,435 | 4,435 | 74 | 0.33 | 222 | +5.00 | +2.33 | +23.56 | 1 % | +24.91 | - | - | - |
| SANDLER ONEILL | <1 | 2,274 | 11,370 | 74 | 0.33 | 495 | +4.35 | +2.33 | 2.35 | 94 % | 1.64 | - | 90 | - |
| JOHNSON RICE & CO | <1 | 18,950 | 18,950 | 48 | 0.70 | 758 | +4.00 | +2.33 | 29.70 | 99 % | 29.35 | - | - | - |
| JP MORGAN CHASE | <1 | 6,267 | 18,800 | 77 | 0.29 | 752 | +4.00 | +2.33 | 1.49 | 92 % | 1.13 | - | - | - |
| WOLFE TRAHAN SECS | <1 | 1,079 | 6,473 | 68 | 0.41 | 324 | +5.00 | +2.33 | 4.53 | 97 % | 3.18 | - | 63 | - |
| HIBERNIA SOUTHCOAST | <1 | 2,853 | 5,705 | 81 | 0.24 | 285 | +5.00 | +2.33 | +8.08 | 2 % | +9.43 | 99 | - | - |



(+) = Cost

TRADE CYCLE DETAIL

DALTON, GREINER, HARTMAN, MAHER Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| CJS SECURITIES | <1 | 1,200 | 3,600 | 62 | 0.49 | 180 | +5.00 | +2.33 | 14.66 | 99 % | 13.31 | 99 | 99 | - |
| PIPER JAFFRAY | <1 | 4,900 | 4,900 | 78 | 0.29 | 245 | +5.00 | +2.33 | +11.40 | 1 % | +12.75 | - | - | 84 |
| NORTHLAND SECURITIES | <1 | 5,815 | 11,630 | 72 | 0.36 | 465 | +4.00 | +2.33 | +5.81 | 6 % | +6.16 | - | - | - |
| ANCORA SECIRITIES | <1 | 5,600 | 5,600 | 80 | 0.25 | 252 | +4.50 | +2.33 | +6.33 | 5 % | +7.18 | - | 13 | - |
| TELSEY ADVISORY GR | <1 | 4,366 | 8,732 | 76 | 0.30 | 342 | +3.92 | +2.33 | 8.21 | 98 % | 7.94 | 12 | 99 | 98 |
| SEAPORT GROUP SECS | <1 | 1,986 | 11,913 | 29 | 1.03 | 481 | +4.03 | +2.33 | 8.05 | 98 % | 7.67 | 92 | 95 | - |
| ISI GROUP INC | <1 | 8,309 | 8,309 | 82 | 0.23 | 332 | +4.00 | +2.33 | +1.74 | 41 % | +2.09 | 96 | 74 | - |
| ITG | <1 | 2,062 | 4,123 | 51 | 0.65 | 97 | +2.36 | +2.33 | +39.45 | 1 % | +38.17 | - | 73 | 37 |
| MAXIM GROUP | <1 | 15,900 | 15,900 | 55 | 0.59 | 557 | +3.50 | +2.33 | 9.32 | 98 % | 9.47 | 90 | - | - |
| LOOP CAPITAL MARKETS | <1 | 1,213 | 2,426 | 46 | 0.73 | 109 | +4.50 | +2.33 | +20.12 | 1 % | +20.98 | - | - | - |



(+) = Cost

TRADE CYCLE DETAIL

EAGLE CAPITAL MANAGEMENT Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|--------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| Grand Total | 14 | 26,385 | 263,850 | 68 | 0.41 | 6,876 | +2.61 | +2.33 | +4.39 | 10 % | +3.35 | 99 | 99 | 1 |
| CAPITAL INSTL SVCS | 13 | 23,539 | 211,850 | 64 | 0.47 | 6,356 | +3.00 | +2.33 | +5.46 | 6 % | +4.81 | 99 | - | - |
| ITG | 2 | 52,000 | 52,000 | 100 | 0.00 | 520 | +1.00 | +2.33 | +0.04 | 80 % | 2.60 | - | - | - |



(+) = Cost

TRADE CYCLE DETAIL

HUBER CAPITAL MANAGEMENT Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|--------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| Grand Total | 12 | 3,688 | 331,926 | 65 | 0.45 | 2,117 | +0.64 | +2.33 | 1.09 | 91 % | 4.10 | 46 | 56 | 98 |
| UBS | 8 | 3,406 | 200,926 | 68 | 0.41 | 1,708 | +0.85 | +2.33 | 1.00 | 91 % | 3.80 | 78 | 9 | 97 |
| CITIGROUP | 2 | 5,217 | 62,600 | 68 | 0.41 | 125 | +0.20 | +2.33 | +2.07 | 33 % | 1.38 | 20 | 95 | 67 |
| GOLDMAN SACHS | 2 | 5,322 | 47,900 | 46 | 0.72 | 96 | +0.20 | +2.33 | 6.05 | 98 % | 9.50 | 87 | 99 | 99 |
| MERRILL LYNCH | <1 | 1,533 | 9,200 | 60 | 0.53 | 55 | +0.60 | +2.33 | +2.08 | 33 % | 0.96 | 48 | 90 | 99 |
| COWEN & CO | <1 | 5,700 | 5,700 | 63 | 0.48 | 57 | +1.00 | +2.33 | 3.26 | 96 % | 5.90 | - | - | - |
| JONES TRADING | <1 | 2,100 | 2,100 | 98 | 0.03 | 21 | +1.00 | +2.33 | +0.36 | 74 % | 2.28 | - | - | - |
| JP MORGAN CHASE | <1 | 1,000 | 1,000 | 100 | 0.01 | 30 | +3.00 | +2.33 | 0.09 | 81 % | 0.74 | 4 | 91 | 94 |
| MKM PARTNERS | <1 | 2,500 | 2,500 | 97 | 0.04 | 25 | +1.00 | +2.33 | 0.56 | 88 % | 3.21 | - | - | 99 |



(+) = Cost

TRADE CYCLE DETAIL

UBS GLOBAL ASSET MGMT Performance (Full Day VWAP)



| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| | | | | | | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| Grand Total | 12 | 3,060 | 385,608 | 57 | 0.57 | 9,077 | +2.35 | +2.33 | 7.17 | 98 % | 8.47 | 22 | 4 | 34 |
| MERRILL LYNCH | 4 | 2,090 | 94,069 | 63 | 0.48 | 4,233 | +4.50 | +2.33 | 0.24 | 84 % | +0.62 | 7 | 4 | 8 |
| SC BERNSTEIN | 2 | 4,148 | 78,815 | 64 | 0.46 | 802 | +1.02 | +2.33 | 16.64 | 99 % | 19.27 | 63 | - | - |
| JP MORGAN CHASE | 1 | 3,409 | 51,134 | 48 | 0.69 | 835 | +1.63 | +2.33 | 0.55 | 88 % | 2.56 | 26 | 73 | 99 |
| GOLDMAN SACHS | <1 | 3,039 | 36,471 | 40 | 0.82 | 638 | +1.75 | +2.33 | 42.02 | 99 % | 43.92 | 78 | 1 | 2 |
| PIPER JAFFRAY | <1 | 17,538 | 17,538 | 84 | 0.20 | 789 | +4.50 | +2.33 | +42.28 | 1 % | +43.13 | 1 | - | - |
| COWEN & CO | <1 | 3,128 | 21,897 | 29 | 1.02 | 438 | +2.00 | +2.33 | 4.83 | 97 % | 6.48 | - | 2 | 2 |
| CREDIT SUISSE | <1 | 3,757 | 22,544 | 62 | 0.49 | 342 | +1.52 | +2.33 | 1.03 | 91 % | 3.16 | 1 | 58 | 90 |
| BROADCORT CAPITAL | <1 | 5,455 | 10,909 | 54 | 0.60 | 218 | +2.00 | +2.33 | 20.51 | 99 % | 22.16 | - | 97 | 2 |
| MORGAN STANLEY | <1 | 2,447 | 12,235 | 72 | 0.36 | 360 | +2.94 | +2.33 | +3.10 | 20 % | +2.39 | 94 | 1 | 67 |
| NEEDHAM & CO INC | <1 | 9,001 | 18,002 | 11 | 1.56 | 5 | +0.03 | +2.33 | 21.66 | 99 % | 25.28 | - | - | - |
| STATE STREET BANK | <1 | 2,289 | 9,157 | 75 | 0.32 | 46 | +0.50 | +2.33 | +2.50 | 27 % | 0.65 | 94 | 45 | 1 |
| APEX CLEARING CORP | <1 | 1,255 | 5,021 | 40 | 0.83 | 100 | +2.00 | +2.33 | +15.99 | 1 % | +14.34 | 6 | 1 | - |
| STIFEL NICOLAUS & CO | <1 | 1,711 | 5,133 | 93 | 0.10 | 231 | +4.50 | +2.33 | +0.57 | 67 % | +1.43 | - | 2 | - |
| JEFFERIES & CO | <1 | 2,683 | 2,683 | 62 | 0.49 | 40 | +1.50 | +2.33 | 5.44 | 97 % | 7.58 | 98 | 97 | 1 |



(+) = Cost

TRADE CYCLE DETAIL

WEATHERBIE Performance (Full Day VWAP)

| | | | | | | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| Grand Total | 30 | 3,454 | 918,765 | 62 | 0.50 | 26,130 | +2.84 | +2.33 | +1.89 | 37 % | +1.09 | 84 | 62 | 33 |
| ITG | 10 | 3,367 | 259,222 | 63 | 0.48 | 9,985 | +3.85 | +2.33 | +2.68 | 24 % | +2.89 | 28 | 24 | 54 |
| THEMIS TRADING LLC | 9 | 3,217 | 289,531 | 62 | 0.50 | 4,949 | +1.71 | +2.33 | +0.84 | 59 % | 1.09 | 50 | 41 | 4 |
| LIQUIDNET | 2 | 6,085 | 97,367 | 63 | 0.48 | 1,558 | +1.60 | +2.33 | +3.46 | 15 % | +1.41 | 99 | 95 | 92 |
| WILLIAM BLAIR | 2 | 2,851 | 48,463 | 54 | 0.62 | 1,745 | +3.60 | +2.33 | +0.47 | 72 % | +0.42 | 10 | 53 | 83 |
| COWEN & CO | 2 | 2,420 | 31,463 | 64 | 0.46 | 1,133 | +3.60 | +2.33 | +4.47 | 9 % | +4.43 | 37 | 95 | 96 |
| JEFFERIES & CO | 1 | 4,403 | 52,830 | 61 | 0.50 | 1,779 | +3.37 | +2.33 | +0.98 | 56 % | +0.70 | - | 96 | 26 |
| STIFEL NICOLAUS & CO | <1 | 3,216 | 12,863 | 78 | 0.28 | 463 | +3.60 | +2.33 | +1.73 | 41 % | +1.69 | 1 | 15 | 20 |
| STEPHENS & CO INC | <1 | 1,918 | 15,340 | 73 | 0.35 | 556 | +3.62 | +2.33 | +7.22 | 3 % | +7.20 | 7 | 1 | 23 |
| NEEDHAM & CO INC | <1 | 1,623 | 12,985 | 38 | 0.86 | 474 | +3.65 | +2.33 | 8.35 | 98 % | 8.34 | 95 | 99 | 83 |
| CANACCORD GENUITY | <1 | 3,859 | 19,293 | 61 | 0.50 | 695 | +3.60 | +2.33 | +3.06 | 21 % | +3.02 | 99 | 93 | 99 |
| CRAIG - HALLUM | <1 | 8,948 | 35,791 | 57 | 0.56 | 1,288 | +3.60 | +2.33 | +0.84 | 59 % | +0.80 | 96 | 2 | - |
| BAIRD, ROBERT W | <1 | 3,449 | 13,796 | 78 | 0.29 | 497 | +3.60 | +2.33 | +4.05 | 11 % | +4.00 | 97 | 99 | 1 |
| OPPENHEIMER & CO INC | <1 | 2,099 | 4,197 | 44 | 0.76 | 151 | +3.60 | +2.33 | +23.00 | 1 % | +22.96 | 96 | 1 | 68 |
| PIPER JAFFRAY | <1 | 3,934 | 3,934 | 15 | 1.40 | 142 | +3.60 | +2.33 | 33.75 | 99 % | 33.80 | 86 | 84 | 99 |
| GOLDMAN SACHS | <1 | 3,245 | 6,490 | 73 | 0.34 | 252 | +3.88 | +2.33 | +5.00 | 7 % | +5.23 | 99 | 1 | 99 |
| JONES TRADING | <1 | 6,242 | 6,242 | 43 | 0.77 | 125 | +2.00 | +2.33 | +7.64 | 3 % | +5.99 | 80 | 99 | 94 |
| LEERINK SWANN | <1 | 4,384 | 4,384 | 88 | 0.16 | 175 | +4.00 | +2.33 | +2.80 | 23 % | +3.15 | 98 | 86 | 88 |
| JP MORGAN CHASE | <1 | 4,574 | 4,574 | 60 | 0.53 | 165 | +3.60 | +2.33 | +4.38 | 10 % | +4.33 | 99 | 96 | - |



(+) = Cost

TRADE CYCLE DETAIL

WEDGE CAPITAL MGMT LLP Performance (Full Day VWAP)

| | | | | | | COMMISSION | | | MARKET IMPACT | | TOTAL COST/SAVINGS | RANK TREND - Full Day VWAP | | |
|----------------------|----------------------------|------------------|--------------|----------------|-----------|------------------|----------------------------|----------------------------|---------------------|--------------------|---|----------------------------|-------------|-------------|
| Broker | Principal Traded (USD/Mil) | Shares Per Order | Total Shares | E - Score Rank | E - Score | Commission (USD) | Your Avg. Commission (cps) | All Trading Universe (cps) | Full Day VWAP (cps) | Rank Full Day VWAP | Commission + Full Day VWAP Vs. Universe | 20171ST (%) | 20164TH (%) | 20163RD (%) |
| Grand Total | 6 | 1,929 | 198,702 | 73 | 0.34 | 6,079 | +3.06 | +2.33 | 0.81 | 90 % | 1.40 | 49 | 91 | 24 |
| BROADCORT CAPITAL | 1 | 1,069 | 17,100 | 80 | 0.25 | 599 | +3.50 | +2.33 | 0.86 | 91 % | 1.00 | 27 | 42 | 30 |
| JP MORGAN CHASE | 1 | 1,350 | 25,641 | 84 | 0.21 | 897 | +3.50 | +2.33 | 0.94 | 91 % | 1.08 | 99 | - | 3 |
| BARCLAYS | <1 | 2,428 | 21,853 | 79 | 0.27 | 765 | +3.50 | +2.33 | 1.78 | 93 % | 1.93 | - | 80 | 45 |
| PIPER JAFFRAY | <1 | 5,846 | 11,692 | 86 | 0.18 | 409 | +3.50 | +2.33 | +0.43 | 72 % | +0.28 | - | - | - |
| WEEDEN & CO | <1 | 2,271 | 38,609 | 76 | 0.30 | 772 | +2.00 | +2.33 | 1.32 | 92 % | 2.96 | 58 | 96 | - |
| JEFFERIES & CO | <1 | 2,628 | 15,769 | 77 | 0.29 | 552 | +3.50 | +2.33 | +5.52 | 6 % | +5.37 | 99 | 2 | 1 |
| SANDLER ONEILL | <1 | 613 | 6,746 | 56 | 0.59 | 236 | +3.50 | +2.33 | 2.68 | 95 % | 2.82 | - | 95 | - |
| CANTOR FITZGERALD | <1 | 2,850 | 5,700 | 49 | 0.68 | 200 | +3.50 | +2.33 | +13.28 | 1 % | +13.13 | - | 1 | 17 |
| OPPENHEIMER & CO INC | <1 | 5,100 | 5,100 | 70 | 0.39 | 179 | +3.50 | +2.33 | +1.42 | 48 % | +1.28 | 89 | - | 94 |
| KNIGHT CAPITAL | <1 | 9,900 | 19,800 | 27 | 1.07 | 396 | +2.00 | +2.33 | +7.91 | 3 % | +6.26 | - | 22 | 69 |
| SC BERNSTEIN | <1 | 6,900 | 13,800 | 89 | 0.15 | 483 | +3.50 | +2.33 | +1.03 | 56 % | +0.89 | 1 | 97 | - |
| RBC CAPITAL MARKETS | <1 | 909 | 10,000 | 51 | 0.66 | 350 | +3.50 | +2.33 | 11.49 | 99 % | 11.63 | 94 | 95 | 37 |
| KEEFE BRUYETTE WOODS | <1 | 1,400 | 5,600 | 72 | 0.36 | 196 | +3.50 | +2.33 | +4.05 | 11 % | +3.90 | 93 | 91 | 68 |
| STIFEL NICOLAUS & CO | <1 | 1,292 | 1,292 | 18 | 1.29 | 45 | +3.50 | +2.33 | 207.71 | 99 % | 207.85 | 95 | 97 | 26 |



(+) = Cost

TRADE DETAIL ANALYSIS

Largest Shares Volume Traded

| | | | | | | | Market Impact |
|----------|----------|---------|------------|------------------|-------------|-----------|---------------------|
| Security | # Orders | Shares | US Dollars | Commission (cps) | % of Volume | E - Score | Full Day VWAP (cps) |
| CHGG | 19 | 236,382 | 2,576,389 | +2.24 | 1.00% | 0.41 | +1.87 |
| WFC | 4 | 128,050 | 6,760,172 | +2.91 | 0.15% | 0.37 | +5.48 |
| VER | 17 | 126,550 | 1,044,080 | +1.99 | 0.04% | 0.63 | +0.79 |
| SCS | 19 | 91,811 | 1,529,160 | +3.98 | 0.90% | 0.50 | +0.65 |
| CNO | 27 | 87,079 | 1,818,359 | +2.49 | 0.24% | 0.47 | 2.91 |
| ZTS | 35 | 69,410 | 3,934,353 | +2.26 | 0.07% | 0.45 | 0.06 |
| TTMI | 10 | 65,660 | 1,187,672 | +4.05 | 0.47% | 0.50 | 2.67 |
| MPW | 10 | 65,230 | 864,698 | +0.79 | 0.10% | 1.77 | 13.95 |
| EVC | 22 | 61,557 | 367,040 | +3.41 | 1.12% | 0.46 | 1.02 |
| ORCL | 5 | 57,600 | 2,619,965 | +0.19 | 0.06% | 0.50 | 3.14 |

Names Most Traded - Total Orders

| | | | | | | | Market Impact |
|----------|----------|---------|------------|------------------|-------------|-----------|---------------------|
| Security | # Orders | Shares | US Dollars | Commission (cps) | % of Volume | E - Score | Full Day VWAP (cps) |
| ZTS | 35 | 69,410 | 3,934,353 | +2.26 | 0.07% | 0.45 | 0.06 |
| INTU | 23 | 23,484 | 2,787,453 | +2.36 | 0.05% | 0.38 | 1.72 |
| CHGG | 19 | 236,382 | 2,576,389 | +2.24 | 1.00% | 0.41 | +1.87 |
| CTSH | 15 | 36,891 | 2,158,561 | +2.99 | 0.06% | 0.46 | 0.91 |
| ALXN | 13 | 28,018 | 2,905,192 | +2.47 | 0.03% | 0.26 | 1.50 |
| MJN | 11 | 23,781 | 2,112,497 | +3.40 | 0.09% | 0.53 | 0.88 |
| ORCL | 5 | 57,600 | 2,619,965 | +0.19 | 0.06% | 0.50 | 3.14 |
| JPM | 4 | 38,425 | 3,279,888 | +2.63 | 0.09% | 0.64 | +14.39 |
| WFC | 4 | 128,050 | 6,760,172 | +2.91 | 0.15% | 0.37 | +5.48 |
| MS | 3 | 51,775 | 2,211,628 | +2.72 | 0.20% | 0.35 | 2.09 |



(+) = Cost

TRADE CONTRIBUTIONS

| Cost\Savings Performance | | | | |
|--------------------------|---------------|-------------|--------------------------|--------------------------------|
| Category | Principal USD | # of Trades | Avg. Market Impact (cps) | Percentage of all Cost\Savings |
| 10 High Cost Trades | 12,130,858 | 10 | +46.68 | 25.96% |
| Cost Trades | 102,370,635 | 1,068 | +17.36 | 100.00% |
| Saving Trades | 96,976,015 | 1,286 | 18.00 | 100.00% |
| 10 Low Cost Trades | 3,448,280 | 10 | 141.42 | 21.42% |





(+) = Cost

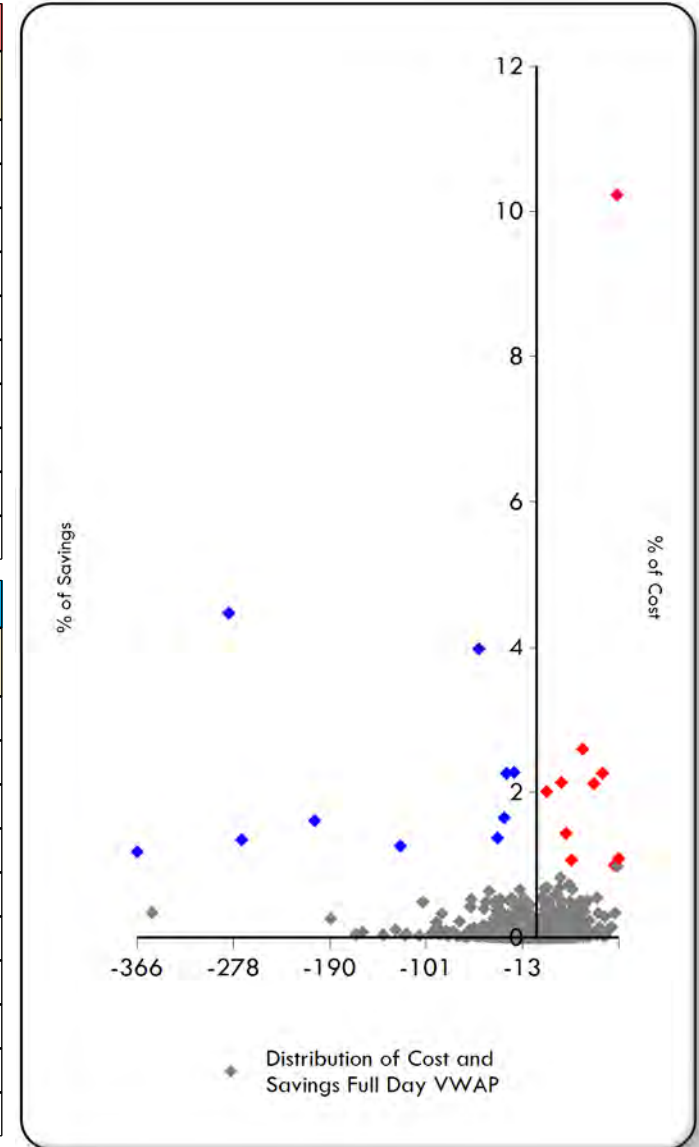
TRADE LEVEL DETAILS

10 High Cost Trades (Full Day VWAP)

| Side | Security | Trade Date | Shares | Cost (%) | E - Score | Full Day VWAP (cps) | Manager | Broker |
|------|----------|------------|--------|----------|-----------|---------------------|------------|------------|
| Sell | YHOO | 2017/06/13 | 39,585 | 10.22 | 1.56 | +73.72 | ALLIANCE R | MORGAN STA |
| Sell | LITE | 2017/05/04 | 17,538 | 2.60 | 0.20 | +42.28 | UBS GLOBAL | PIPER JAFF |
| Buy | AEO | 2017/05/17 | 10,696 | 2.27 | 1.27 | +60.47 | DALTON, GR | LIQUIDNET |
| Sell | JPM | 2017/05/23 | 26,825 | 2.14 | 0.56 | +22.74 | EAGLE CAPI | CAPITAL IN |
| Sell | W | 2017/05/08 | 11,527 | 2.12 | 0.76 | +52.58 | WEATHERBIE | ITG |
| Buy | WFC | 2017/05/12 | 62,200 | 2.01 | 0.50 | +9.24 | EAGLE CAPI | CAPITAL IN |
| Buy | NXPI | 2017/06/23 | 15,200 | 1.44 | 3.12 | +26.99 | ALLIANCE R | JP MORGAN |
| Buy | BABA | 2017/06/14 | 4,119 | 1.09 | 0.92 | +75.54 | BROWN ADVI | CAPITAL IN |
| Buy | QEP | 2017/06/15 | 9,555 | 1.07 | 1.46 | +31.99 | WEDGE CAPI | KNIGHT CAP |
| Buy | FB | 2017/06/23 | 4,000 | 1.00 | 1.09 | +71.29 | ALLIANCE R | JP MORGAN |

10 Low Cost Trades (Full Day VWAP)

| Side | Security | Trade Date | Shares | Savings (%) | E - Score | Full Day VWAP (cps) | Manager | Broker |
|------|----------|------------|--------|-------------|-----------|---------------------|------------|------------|
| Buy | AVXS | 2017/06/21 | 5,400 | 4.47 | 1.26 | 282.27 | UBS GLOBAL | GOLDMAN SA |
| Sell | SNCR | 2017/04/27 | 25,600 | 3.98 | 0.55 | 53.00 | UBS GLOBAL | SC BERNSTE |
| Buy | AMD | 2017/06/23 | 37,500 | 2.28 | 1.43 | 20.71 | ALLIANCE R | JP MORGAN |
| Buy | MPW | 2017/04/26 | 28,070 | 2.26 | 2.76 | 27.49 | CENTERSQUA | MERRILL LY |
| Buy | RICE | 2017/05/04 | 18,950 | 1.65 | 0.70 | 29.70 | DALTON, GR | JOHNSON RI |
| Buy | NVDA | 2017/06/23 | 2,700 | 1.61 | 1.19 | 203.54 | ALLIANCE R | JP MORGAN |
| Buy | EXEL | 2017/06/23 | 13,100 | 1.37 | 2.19 | 35.76 | ALLIANCE R | JP MORGAN |
| Buy | TSRO | 2017/06/23 | 1,700 | 1.35 | 1.55 | 270.46 | ALLIANCE R | JP MORGAN |
| Buy | RARE | 2017/04/19 | 3,443 | 1.26 | 0.59 | 124.91 | WEATHERBIE | ITG |
| Buy | COHR | 2017/06/23 | 1,100 | 1.18 | 1.74 | 366.38 | ALLIANCE R | JP MORGAN |



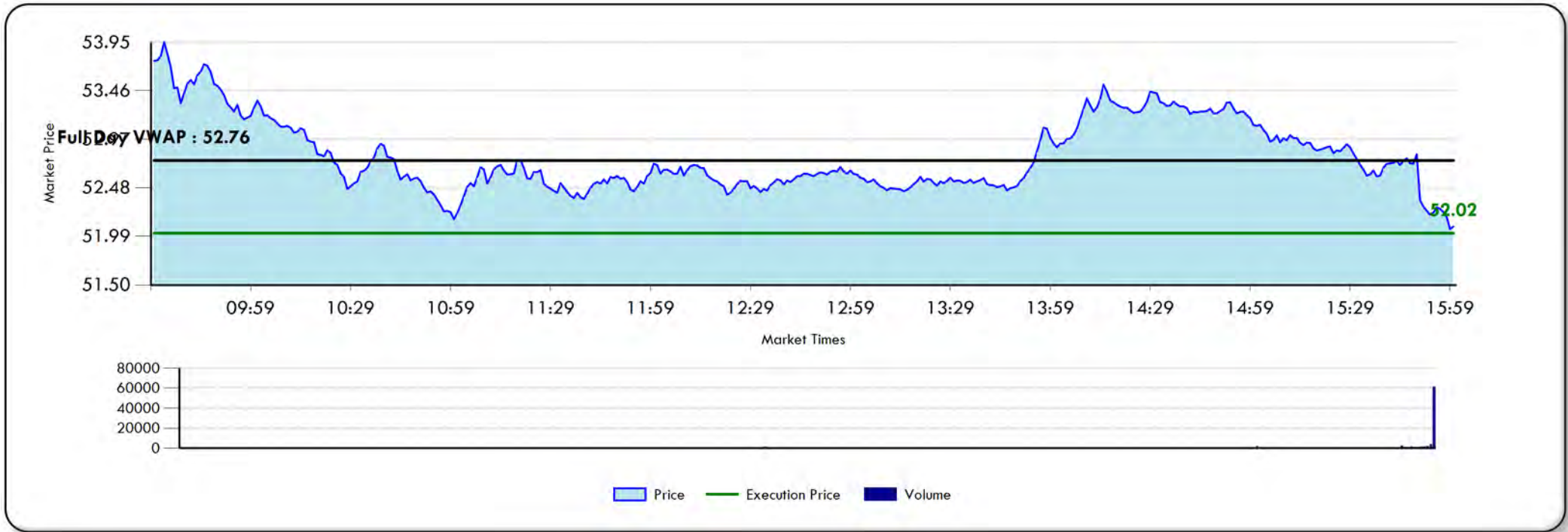


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

YH00 - 2017/06/13

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------|----------------|---------------------|---------------------|--------|--------------------|---------------------|--------------------------|--------------------------|-----------|------------|
| Sell | ALLIANCE R 3000 CAPITAL MANAGEM | MORGAN STANLEY | 06/13/2017 09:30:00 | 06/13/2017 16:00:00 | 39,585 | 52.0180 | 52.7552 | +29,181 | +73.72 | 1.56 | 0.05 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 10.22% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

LITE - 2017/05/04

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|--------------------------|---------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Sell | UBS GLOBAL ASSET MGMT | PIPER JAFFRAY | 05/04/2017 09:30:00 | 05/04/2017 16:00:00 | 17,538 | 48.1623 | 48.5851 | +7,415 | +42.28 | 0.20 | 0.25 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 2.60% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

AEO - 2017/05/17

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------|-----------|---------------------|---------------------|--------|--------------------|---------------------|--------------------------|--------------------------|-----------|------------|
| Buy | DALTON, GREINER, HARTMAN, MAHER | LIQUIDNET | 05/17/2017 09:30:00 | 05/17/2017 16:00:00 | 10,696 | 12.0768 | 11.4721 | +6,468 | +60.47 | 1.27 | 0.04 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 2.27% of your market impact cost.

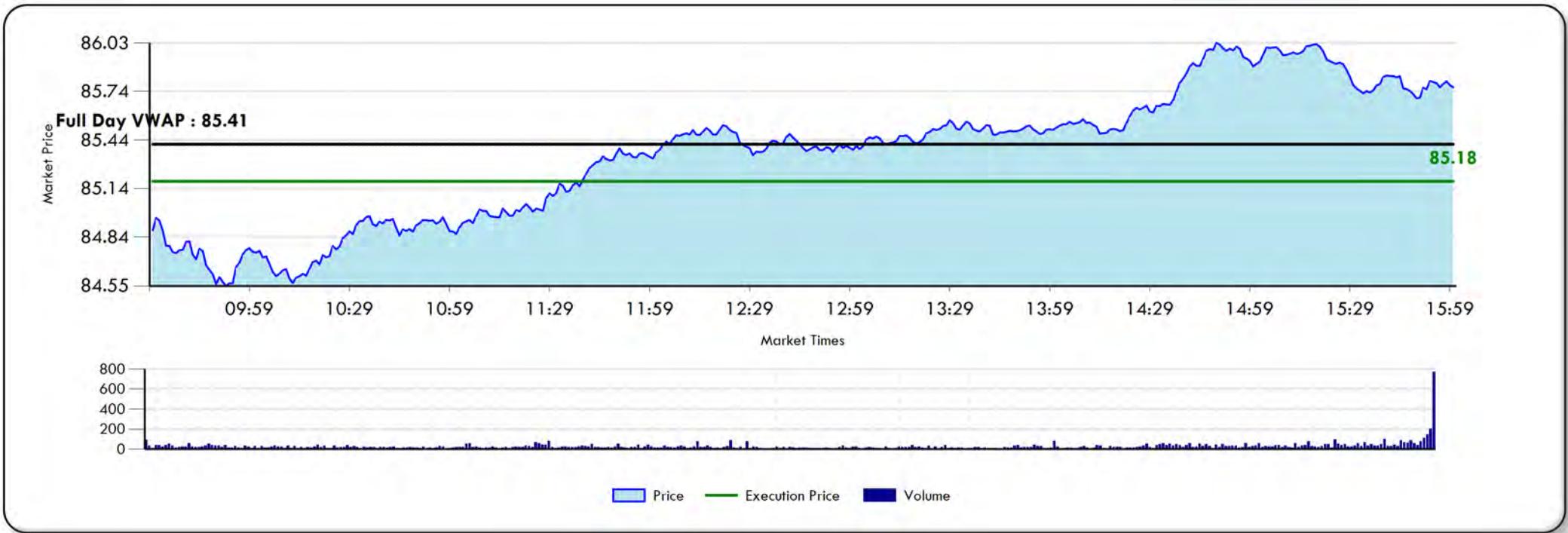


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

JPM - 2017/05/23

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|-----------------------------|-----------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Sell | EAGLE CAPITAL MANAGEMENT | CAPITAL INSTL SVCS | 05/23/2017 09:30:00 | 05/23/2017 16:00:00 | 26,825 | 85.1842 | 85.4116 | +6,101 | +22.74 | 0.56 | 0.25 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 2.14% of your market impact cost.

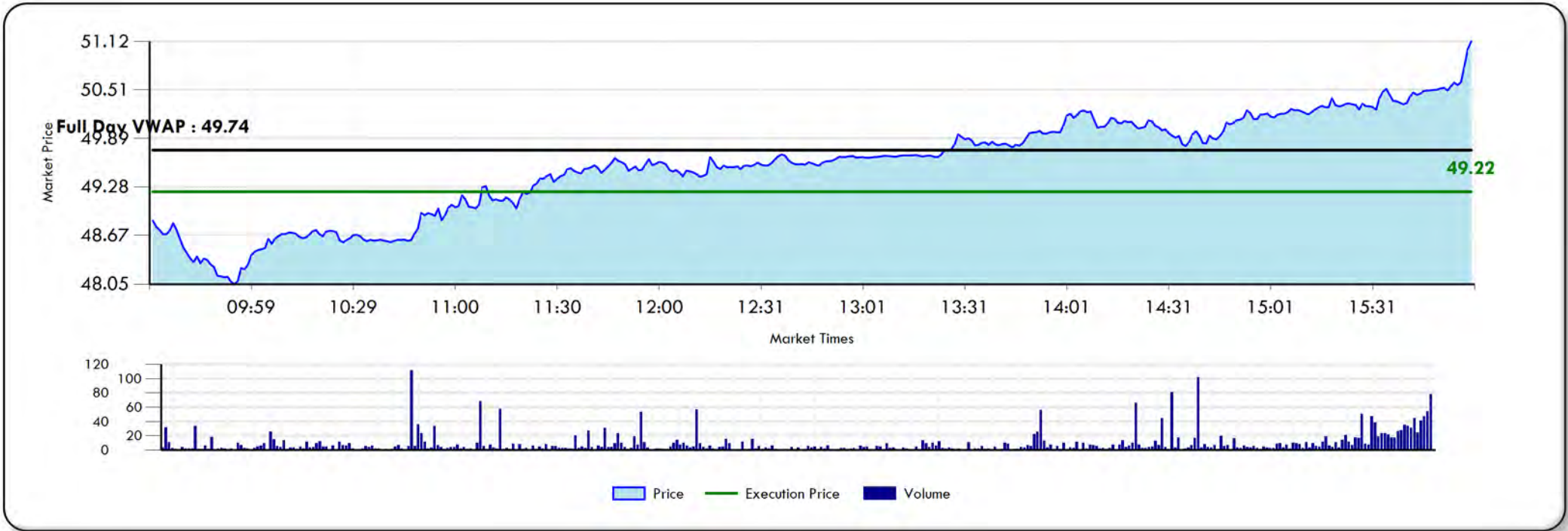


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

W - 2017/05/08

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|------------|--------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Sell | WEATHERBIE | ITG | 05/08/2017 09:30:00 | 05/08/2017 16:00:00 | 11,527 | 49.2175 | 49.7433 | +6,061 | +52.58 | 0.76 | 0.34 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 2.12% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

WFC - 2017/05/12

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|--------------------------|--------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | EAGLE CAPITAL MANAGEMENT | CAPITAL INSTL SVCS | 05/12/2017 09:30:00 | 05/12/2017 16:00:00 | 62,200 | 52.9575 | 52.8651 | +5,747 | +9.24 | 0.50 | 0.22 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 2.01% of your market impact cost.

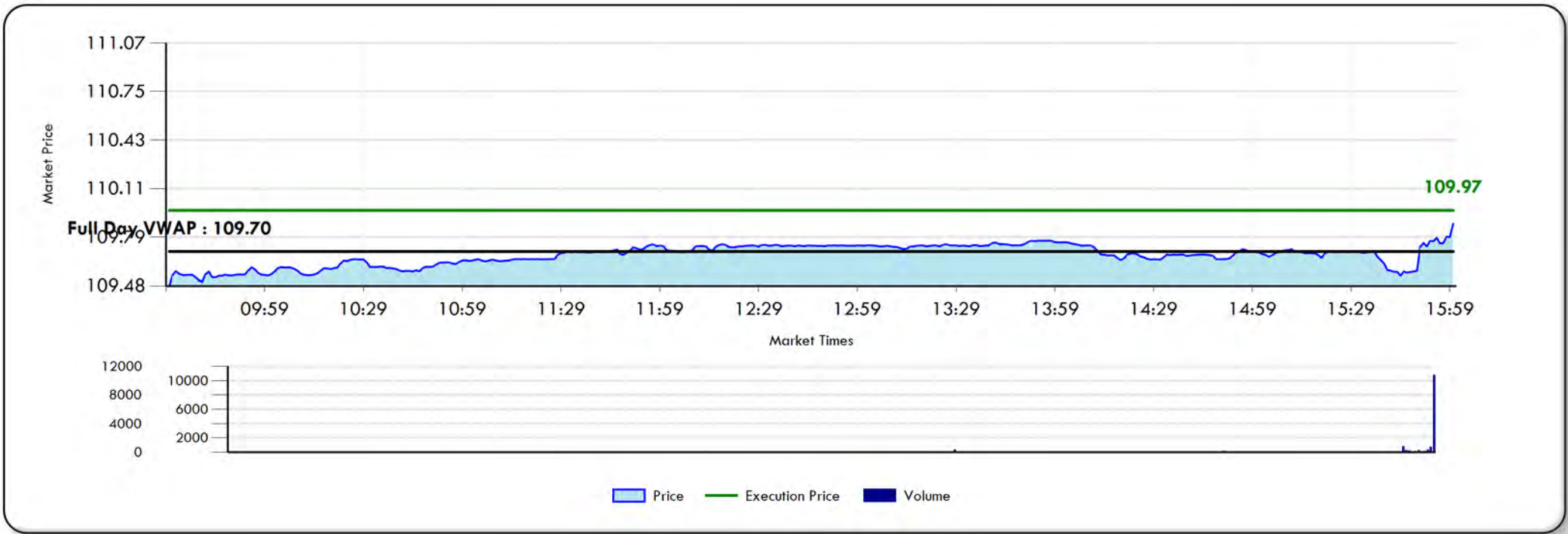


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

NXPI - 2017/06/23

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------------|--------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | ALLIANCE R 3000 CAPITAL MANAGEM | JP MORGAN CHASE | 06/23/2017 09:30:00 | 06/23/2017 16:00:00 | 15,200 | 109.9692 | 109.6993 | +4,103 | +26.99 | 3.12 | 0.15 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.44% of your market impact cost.

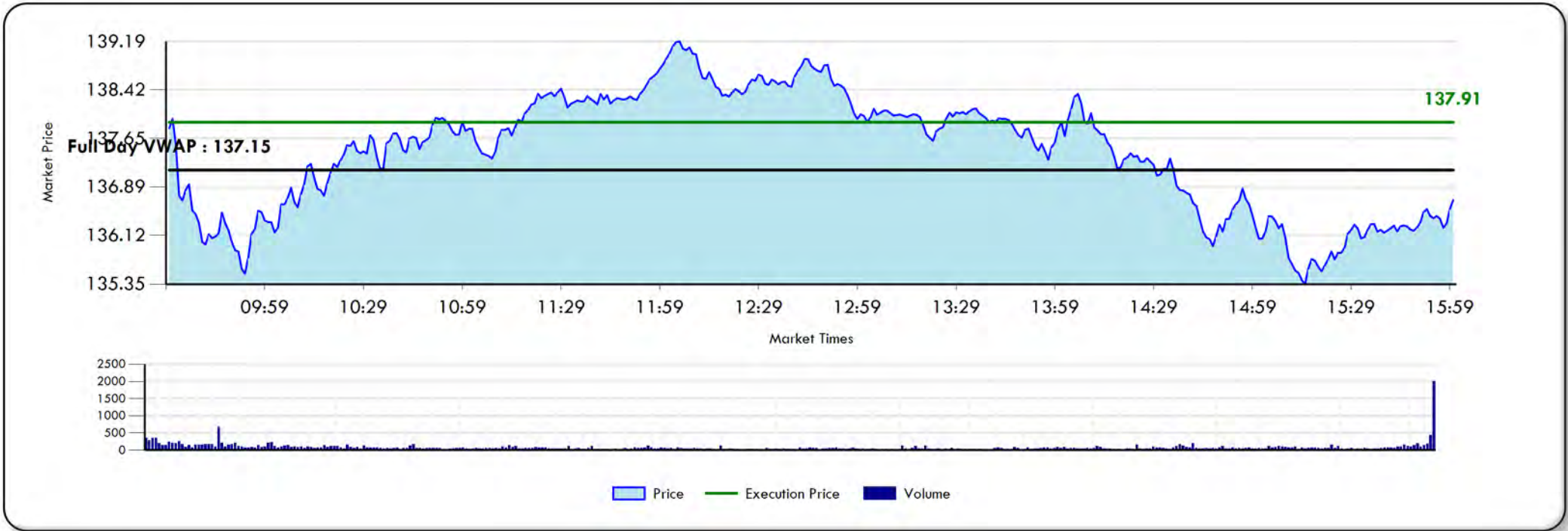


(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

BABA - 2017/06/14

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|-------------------|-----------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | BROWN ADVISORY | CAPITAL INSTL SVCS | 06/14/2017 09:30:00 | 06/14/2017 16:00:00 | 4,119 | 137.9065 | 137.1511 | +3,111 | +75.54 | 0.92 | 0.01 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.09% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

QEP - 2017/06/15

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|------------------------|----------------|---------------------|---------------------|--------|--------------------|---------------------|--------------------------|--------------------------|-----------|------------|
| Buy | WEDGE CAPITAL MGMT LLP | KNIGHT CAPITAL | 06/15/2017 09:30:00 | 06/15/2017 16:00:00 | 9,555 | 9.6014 | 9.2815 | +3,057 | +31.99 | 1.46 | 0.19 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.07% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - HIGH COST

FB - 2017/06/23

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------------|--------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | ALLIANCE R 3000 CAPITAL MANAGEM | JP MORGAN CHASE | 06/23/2017 09:30:00 | 06/23/2017 16:00:00 | 4,000 | 155.0548 | 154.3419 | +2,852 | +71.29 | 1.09 | 0.03 |



NOTES

- Out of all your high cost trades that lost to Full Day VWAP, this order made up 1.00% of your market impact cost.



(+) = Cost

TRADE LEVEL DETAIL - LOW COST

AVXS - 2017/06/21

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|--------------------------|------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | UBS GLOBAL ASSET MGMT | GOLDMAN SACHS | 06/21/2017 09:30:00 | 06/21/2017 16:00:00 | 5,400 | 70.0000 | 72.8227 | 15,243 | 282.27 | 1.26 | 0.27 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 4.47% of your market impact savings.

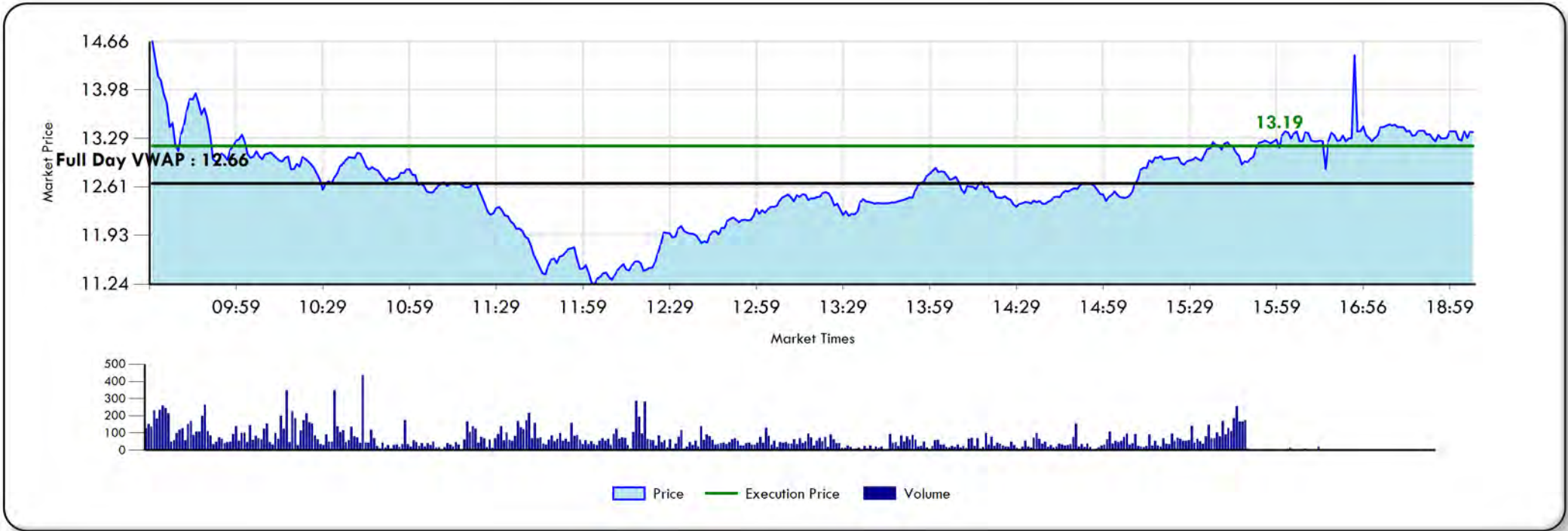


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

SNCR - 2017/04/27

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|--------------------------|--------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Sell | UBS GLOBAL ASSET MGMT | SC BERNSTEIN | 04/27/2017 09:30:00 | 04/27/2017 16:00:00 | 25,600 | 13.1857 | 12.6557 | 13,568 | 53.00 | 0.55 | 0.10 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 3.98% of your market impact savings.

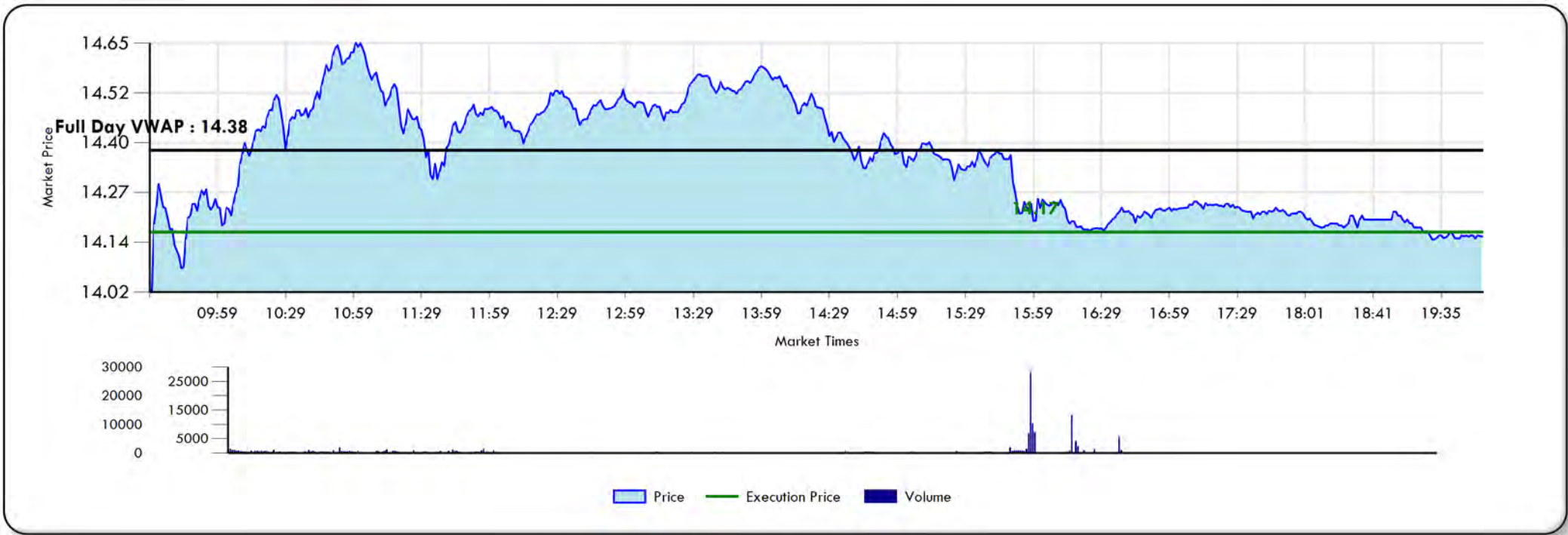


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

AMD - 2017/06/23

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------------|--------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | ALLIANCE R 3000 CAPITAL MANAGEM | JP MORGAN CHASE | 06/23/2017 09:30:00 | 06/23/2017 16:00:00 | 37,500 | 14.1686 | 14.3757 | 7,765 | 20.71 | 1.43 | 0.03 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 2.28% of your market impact savings.

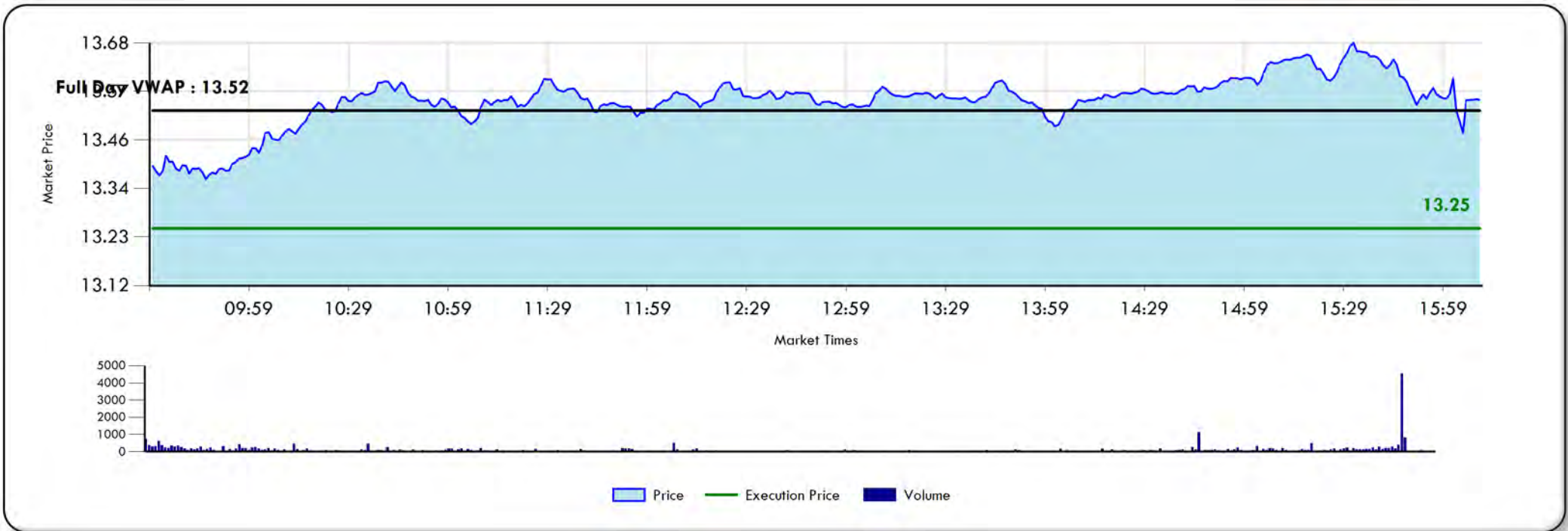


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

MPW - 2017/04/26

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|--------------|---------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | CENTERSQUARE | MERRILL LYNCH | 04/26/2017 09:30:00 | 04/26/2017 16:00:00 | 28,070 | 13.2500 | 13.5249 | 7,716 | 27.49 | 2.76 | 0.08 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 2.26% of your market impact savings.

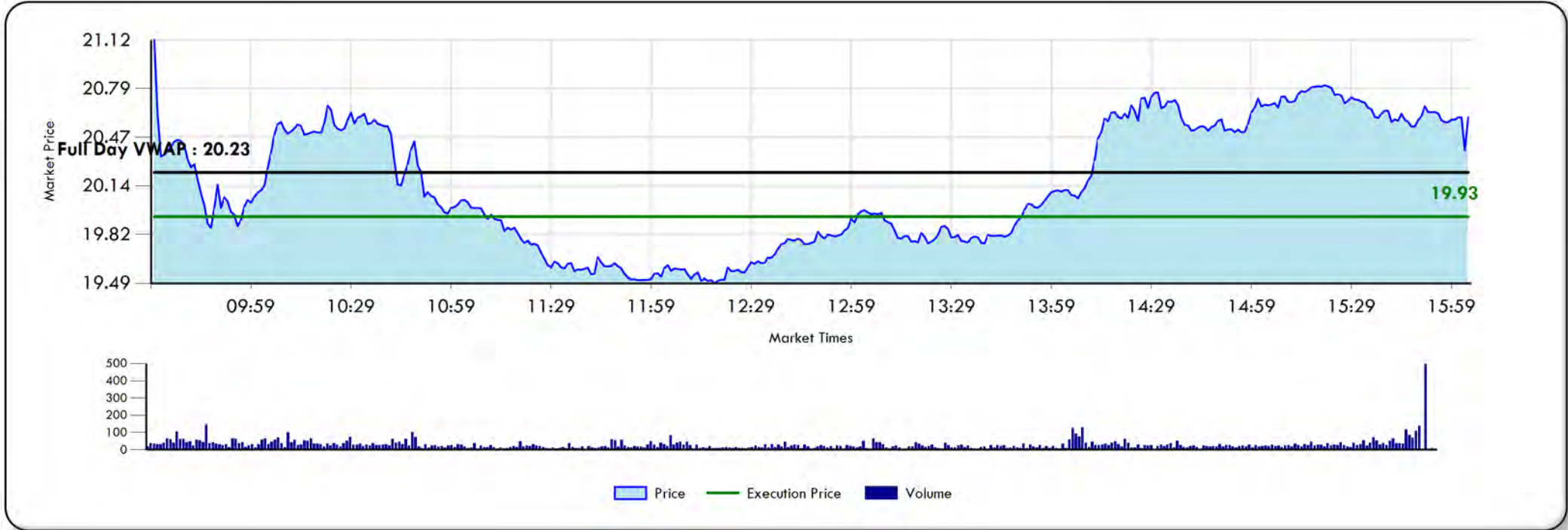


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

RICE - 2017/05/04

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|--|----------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | DALTON, GREINER, HARTMAN, MAHER | JOHNSON RICE & CO | 05/04/2017 09:30:00 | 05/04/2017 16:00:00 | 18,950 | 19.9333 | 20.2303 | 5,629 | 29.70 | 0.70 | 0.17 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.65% of your market impact savings.

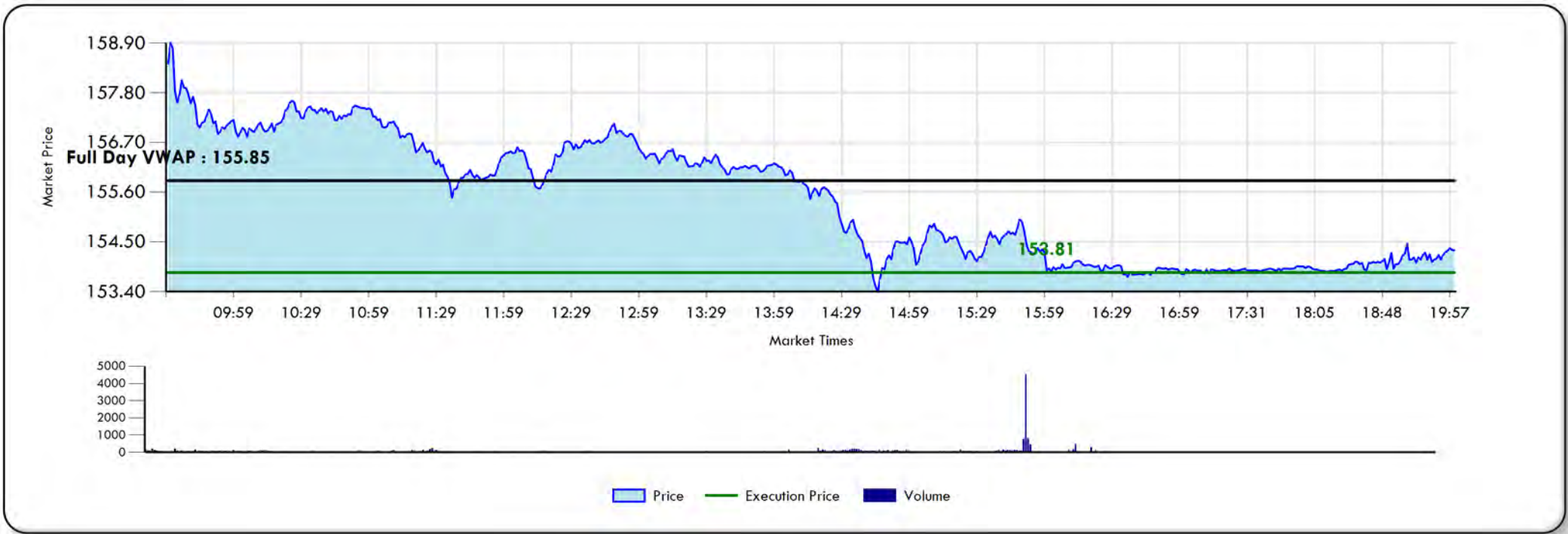


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

NVDA - 2017/06/23

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------------|--------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | ALLIANCE R 3000 CAPITAL MANAGEM | JP MORGAN CHASE | 06/23/2017 09:30:00 | 06/23/2017 16:00:00 | 2,700 | 153.8149 | 155.8503 | 5,496 | 203.54 | 1.19 | 0.01 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.61% of your market impact savings.

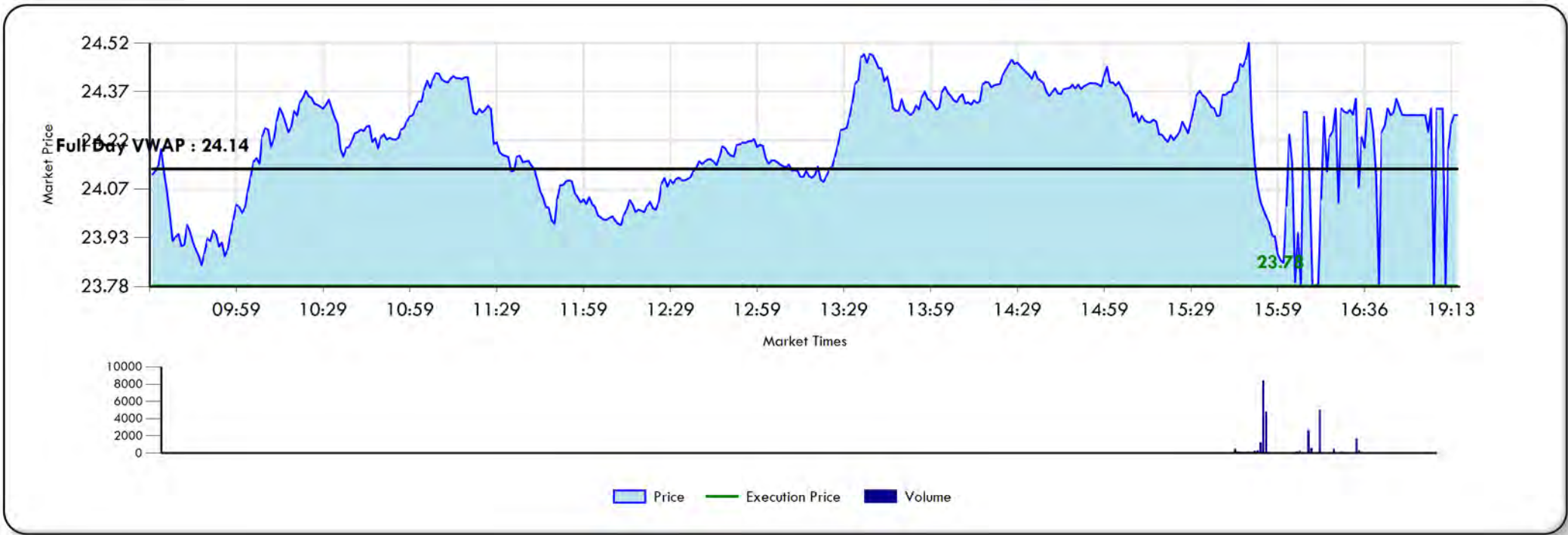


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

EXEL - 2017/06/23

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------------|--------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | ALLIANCE R 3000 CAPITAL MANAGEM | JP MORGAN CHASE | 06/23/2017 09:30:00 | 06/23/2017 16:00:00 | 13,100 | 23.7777 | 24.1353 | 4,684 | 35.76 | 2.19 | 0.19 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.37% of your market impact savings.

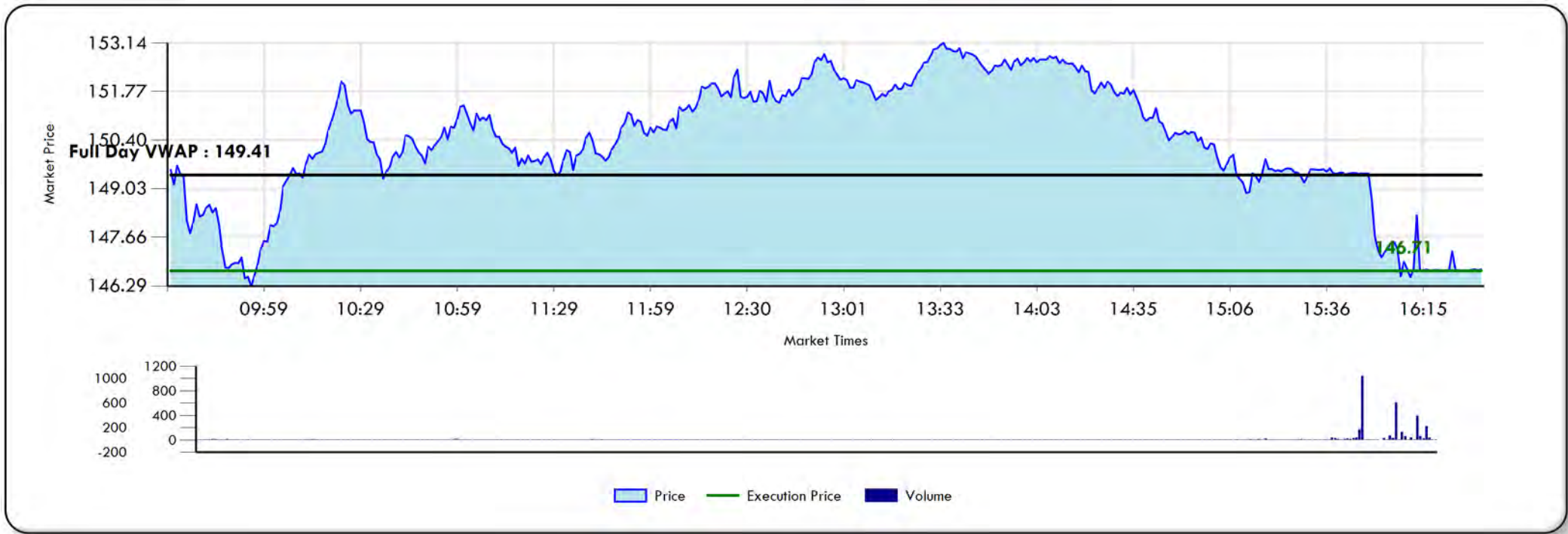


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

TSRO - 2017/06/23

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------------|--------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | ALLIANCE R 3000 CAPITAL MANAGEM | JP MORGAN CHASE | 06/23/2017 09:30:00 | 06/23/2017 16:00:00 | 1,700 | 146.7056 | 149.4102 | 4,598 | 270.46 | 1.55 | 0.13 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.35% of your market impact savings.

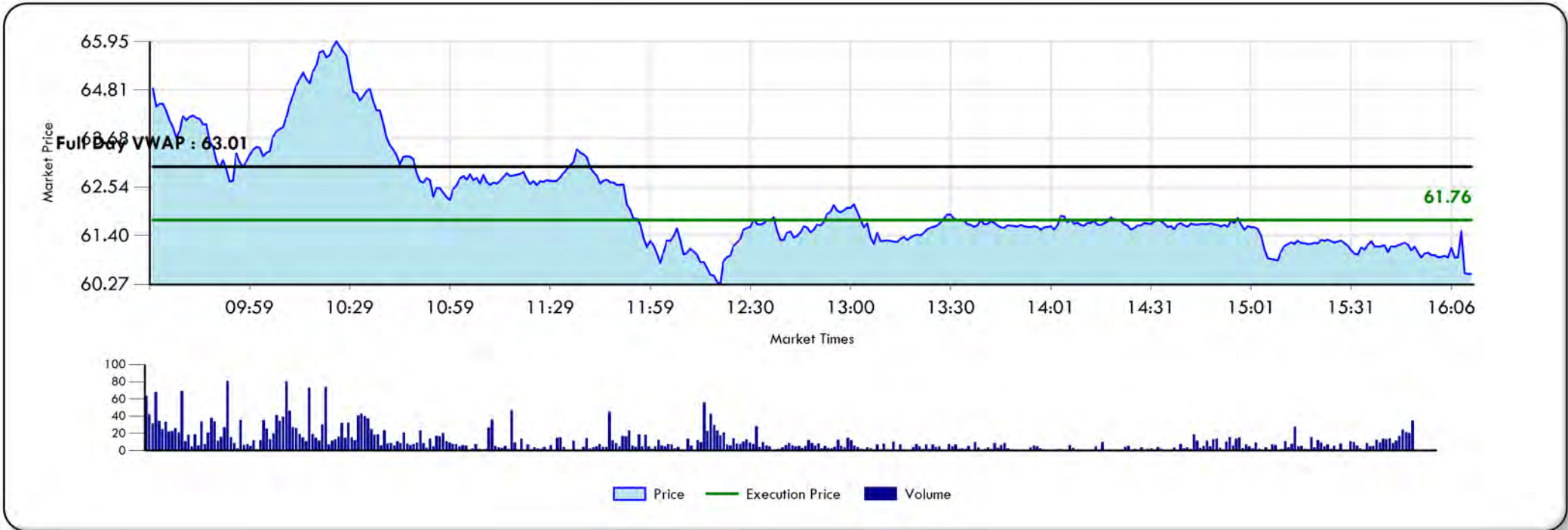


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

RARE - 2017/04/19

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|------------|--------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | WEATHERBIE | ITG | 04/19/2017 09:30:00 | 04/19/2017 16:00:00 | 3,443 | 61.7647 | 63.0138 | 4,301 | 124.91 | 0.59 | 0.08 |



NOTES

- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.26% of your market impact savings.

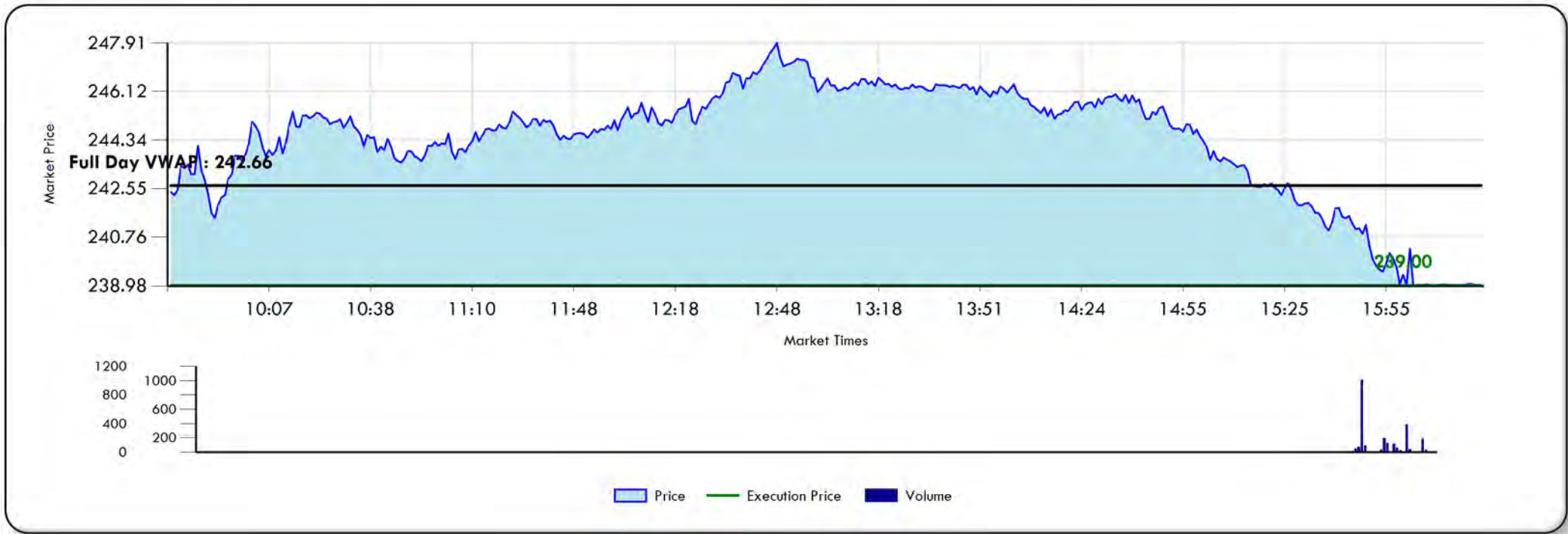


(+) = Cost

TRADE LEVEL DETAIL - LOW COST

COHR - 2017/06/23

| Side | Manager | Broker | Time In (EST) | Time Out (EST) | Shares | Client Price (USD) | Full Day VWAP (USD) | Cost Full Day VWAP (USD) | Cost Full Day VWAP (cps) | E - Score | Volume (%) |
|------|---------------------------------------|--------------------|------------------------|------------------------|--------|-----------------------|------------------------|--------------------------------|--------------------------------|-----------|---------------|
| Buy | ALLIANCE R 3000 CAPITAL MANAGEM | JP MORGAN CHASE | 06/23/2017 09:30:00 | 06/23/2017 16:00:00 | 1,100 | 238.9966 | 242.6604 | 4,030 | 366.38 | 1.74 | 0.19 |



NOTES

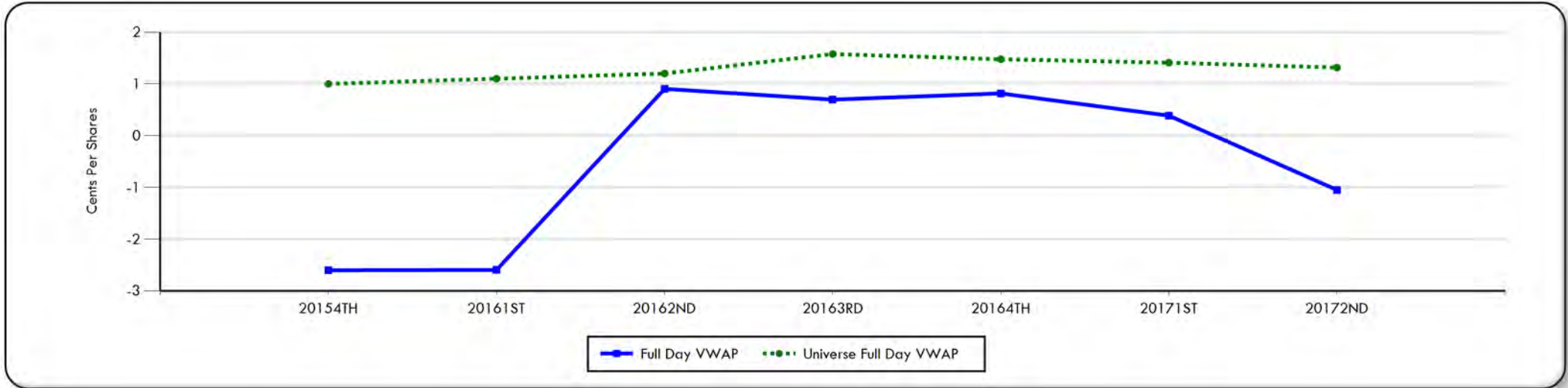
- Out of all your low cost trades that beat to Full Day VWAP, this order made up 1.18% of your market impact savings.



(+) = Cost

TRADE HISTORY

| Trade History | | | | | | |
|---------------|--------------|----------------------|------------|---------|---------------|-----------------------------|
| Period | Total Shares | Total Dollars Traded | Commission | | Full Day VWAP | Full Day VWAP Universe Rank |
| | | | (cps) | (\$) | | |
| 20154TH | 4,115,237 | 141,230,488 | +3.13 | 128,699 | 2.60 | 86 |
| 20161ST | 3,048,612 | 94,866,660 | +3.15 | 96,160 | 2.60 | 89 |
| 20162ND | 5,778,580 | 199,522,932 | +2.59 | 149,738 | +0.90 | 59 |
| 20163RD | 3,727,750 | 130,612,069 | +3.24 | 120,906 | +0.70 | 67 |
| 20164TH | 3,691,765 | 124,133,249 | +3.16 | 116,656 | +0.82 | 65 |
| 20171ST | 3,961,231 | 140,137,188 | +2.63 | 104,144 | +0.39 | 74 |
| 20172ND | 5,271,800 | 199,346,650 | +2.32 | 122,417 | 1.05 | 91 |



Note on Universes:

Universes constructed of preferred securities are exclusive of fixed income transactions such as convertible bonds

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SACRAMENTO COUNTY

US Fixed Income Analysis

Period End June 30, 2017



Sacramento County
Period End June 30, 2017
(US Fixed Income Analysis)

EXECUTIVE SUMMARY

Elkins/McSherry has been providing trading cost analyses to institutional investors since 1991. During that time we have produced Post-Trade Cost Analyses for many of the worlds largest investment managers, pension funds, banks, and broker dealers. Using this vast experience combined with an un-matched collection of global fixed income market and Universe data, Elkins/McSherry has recently produced a Trading Cost Analysis on behalf of Sacramento County. This study evaluates U.S. fixed income executions from April 01,2017 to June 30,2017. The analysis included trading of 849 trades in 277 different issues representing \$789,017,837 in principal across municipals, mortgages, governments and corporates.

Methodology:

The Elkins/McSherry analysis measures trading efficiency by quantifying the cost of each trade by comparing your executed price to the average price or benchmark price on the day of the trade and to the Elkins/McSherry U.S. Fixed Income Trading Cost Universe. Daily prices are calculated from Market Axess, Tullett Prebon, Bloomberg and Reuters. For comparison purposes, Elkins/McSherry establishes average institutional trading costs quarterly for the most actively traded U.S.treasury, corporates, agencies, mortgages and municipal issues. The "Universe" is the average trading cost incurred by pension funds, investment managers, banks and brokers for Treasuries, Corporates, Agencies, Mortgages and Municipals. Benchmark prices are calculated by using the following methodologies: Government Bonds – Average of six indicative prices received from Tullett Prebon. Municipal Bonds – Average of institutional sized execution prices from MSRB. If actual trade prices are not available the Elkins/McSherry analysis defaults to a fair value price from Reuters or Bloomberg. Corporate Bonds – Average of execution prices where available, from TRACE and Market Axess. If actual trade prices are not available the Elkins/McSherry analysis defaults to a fair value price from Reuters or Bloomberg. Mortgage Bonds – Reuters or Bloomberg fair value prices.

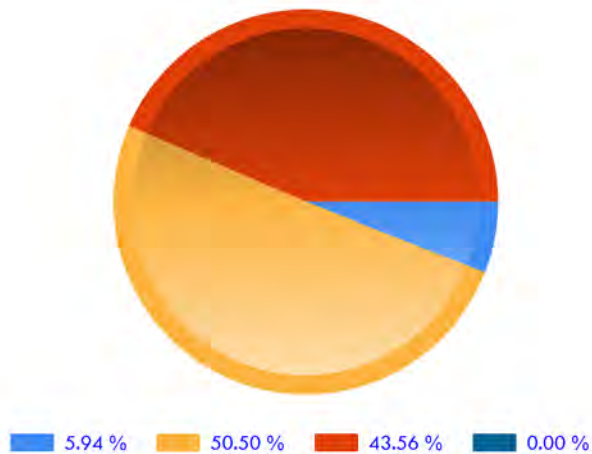
Results:

| Buy/Sell | GRAND TOTAL PERFORMANCE | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | | |
|-------------|-------------------------|------------------|------------------|---------------------------|------------------|------------------------|---|-----------------------------------|------------|------------|------------|------------|
| | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| BUYS | 387 | 391 | 154 | +337.87 | +8.74 | +7.15 | +61.67 | +1.59 | +7.88 | +12.19 | +2.63 | 0.90 |
| SELLS | 403 | 458 | 204 | 349.07 | 8.67 | +5.41 | 566.66 | 14.08 | 5.46 | 14.01 | 3.11 | 1.27 |
| GRAND TOTAL | 789 | 849 | 277 | 11.21 | 0.14 | +6.26 | 504.99 | 6.40 | +1.25 | 0.97 | 0.25 | 1.10 |

EXECUTIVE SUMMARY

| BOND TYPES PERFORMANCE | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | | |
|------------------------|---------------------|---------------|---------------|------------------------|---------------|---------------------|--------------------------------------|-----------------------------------|---------|---------|---------|---------|
| Bond Type | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| Governments | 399 | 256 | 85 | +7.91 | +0.20 | +6.19 | 238.96 | 5.99 | +0.12 | +1.23 | +0.07 | 0.11 |
| Mortgages | 345 | 513 | 120 | 40.45 | 1.17 | +5.21 | 220.00 | 6.38 | +1.58 | 4.63 | 1.31 | 1.17 |
| Corporates | 45 | 79 | 71 | +18.41 | +4.11 | +14.47 | 46.36 | 10.36 | +6.12 | +1.84 | +8.03 | 4.93 |
| Municipals | <1 | 1 | 1 | +2.93 | +34.00 | +30.23 | +0.32 | +3.77 | - | 19.52 | - | - |

Bonds by Principal Traded



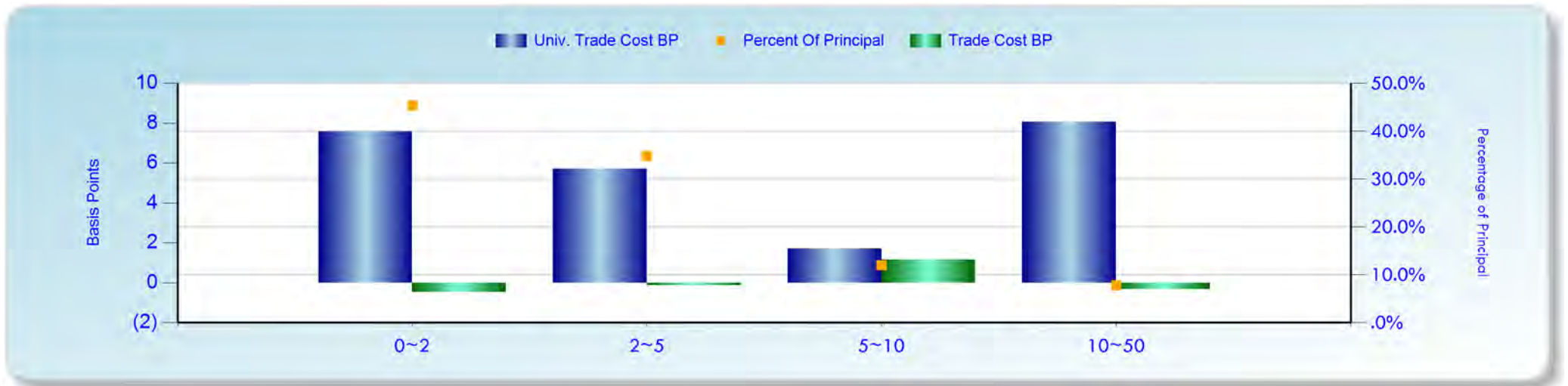
Historical Trade Cost Trend



EXECUTIVE SUMMARY

EXECUTION PERFORMANCE SUMMARY

| Trade Size (Millions) | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP |
|-----------------------|---------------------|---------------|---------------|------------------------|---------------|---------------------|--------------------------------------|------|
| 0~2 | 358 | 738 | 262 | 16.93 | 0.47 | +7.57 | 287.91 | 8.04 |
| 2~5 | 275 | 93 | 44 | 3.22 | 0.12 | +5.71 | 160.15 | 5.83 |
| 5~10 | 95 | 14 | 11 | +10.92 | +1.15 | +1.72 | 5.31 | 0.57 |
| 10~50 | 62 | 4 | 4 | 1.98 | 0.32 | +8.07 | 51.62 | 8.39 |



EXECUTIVE SUMMARY

GRADING SUMMARY

| Grading | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP |
|-----------------------|---------------------|---------------|---------------|------------------------|---------------|---------------------|--------------------------------------|-------|
| Govt-INVESTMENT GRADE | 399 | 256 | 85 | +7.91 | +0.20 | +6.19 | 238.96 | 5.99 |
| Mtge-High Yield | 342 | 511 | 118 | 34.84 | 1.02 | +5.15 | 211.14 | 6.17 |
| Corp-INVESTMENT GRADE | 44 | 71 | 67 | +18.66 | +4.20 | +14.29 | 44.77 | 10.09 |
| Mtge-INVESTMENT GRADE | 3 | 2 | 2 | 5.61 | 22.07 | +12.76 | 8.86 | 34.83 |
| Muni-INVESTMENT GRADE | <1 | 1 | 1 | +2.93 | +34.00 | +30.23 | +0.32 | +3.77 |
| Corp-High Yield | <1 | 8 | 4 | 0.26 | 6.97 | +35.79 | 1.59 | 42.76 |



EXECUTIVE SUMMARY

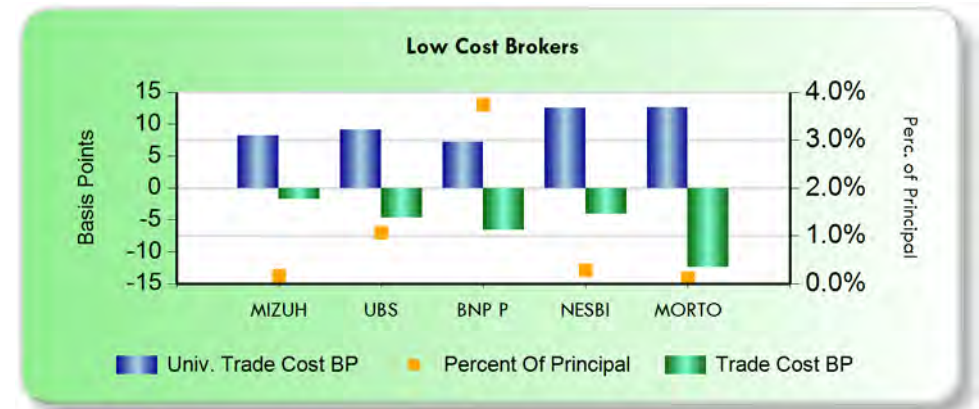
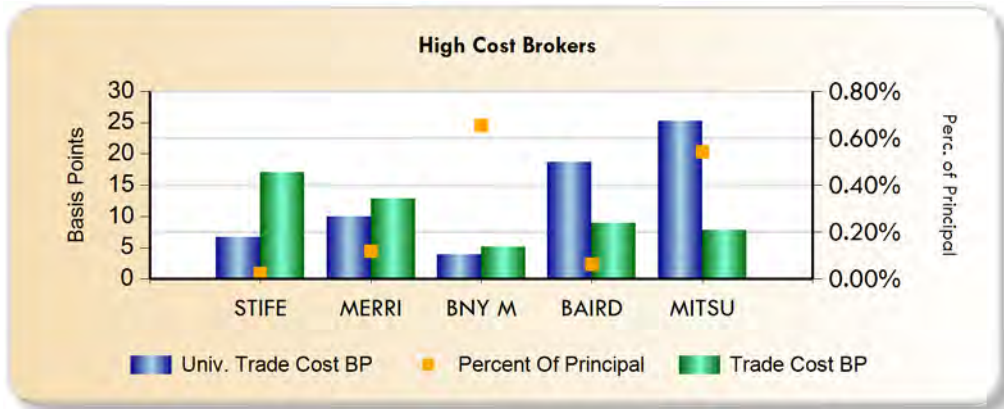
RATING SUMMARY

| Rating | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous.\$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | Cost Diff. from Universe BP |
|--------|---------------------|---------------|---------------|-----------------------|---------------|---------------------|--------------------------------------|-----------------------------|
| AAA | 405.09 | 265 | 93 | +3.55 | +0.09 | +6.26 | 249.97 | 6.17 |
| NR | 342.30 | 511 | 118 | 34.84 | 1.02 | +5.15 | 211.14 | 6.17 |
| A | 10.07 | 12 | 11 | 1.96 | 1.95 | +16.06 | 18.14 | 18.01 |
| BBB+ | 9.87 | 17 | 16 | +11.01 | +11.15 | +14.68 | 3.49 | 3.53 |
| BBB- | 5.79 | 12 | 12 | +0.84 | +1.45 | +11.78 | 5.98 | 10.33 |
| BBB | 5.63 | 8 | 8 | +5.85 | +10.40 | +16.18 | 3.25 | 5.78 |
| A- | 5.07 | 9 | 8 | +2.06 | +4.07 | +17.06 | 6.59 | 12.99 |
| AA- | 2.63 | 4 | 4 | +2.16 | +8.23 | +18.38 | 2.67 | 10.15 |
| A+ | 1.48 | 2 | 2 | +0.38 | +2.54 | +11.21 | 1.29 | 8.67 |
| AA+ | <1 | 1 | 1 | +0.00 | +0.00 | +12.53 | 0.88 | 12.53 |



EXECUTIVE SUMMARY

| BROKER | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous.\$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP |
|---|-------------------------|------------------|---------------|--------------------------|------------------|------------------------|---|--------|
| 5 HIGHEST COST BROKERS (Sorted By Trade Cost BP) | | | | | | | | |
| STIFEL NICOLAUS & CO | <1 | 1 | 1 | +0.33 | +17.05 | +6.75 | +0.20 | +10.30 |
| MERRILL LYNCH | <1 | 2 | 2 | +1.20 | +12.84 | +9.93 | +0.27 | +2.91 |
| BNY MELLON | 5 | 6 | 6 | +2.65 | +5.13 | +3.96 | +0.60 | +1.17 |
| BAIRD, ROBERT W | <1 | 7 | 6 | +0.45 | +8.92 | +18.73 | 0.49 | 9.81 |
| MITSUBISHI UFJ SECS | 4 | 5 | 4 | +3.36 | +7.85 | +25.26 | 7.46 | 17.41 |
| 5 LOWEST COST BROKERS (Sorted By Trade Cost BP) | | | | | | | | |
| MIZUHO | 1 | 2 | 2 | 0.22 | 1.76 | +8.26 | 1.28 | 10.02 |
| UBS | 8 | 25 | 22 | 3.92 | 4.65 | +9.10 | 11.58 | 13.75 |
| BNP PARIBAS | 30 | 66 | 38 | 19.57 | 6.63 | +7.18 | 40.77 | 13.81 |
| NESBITT BURNS | 2 | 3 | 2 | 0.89 | 4.08 | +12.55 | 3.62 | 16.63 |
| MORTON HALL & ROUNDS | <1 | 1 | 1 | 1.12 | 12.39 | +12.61 | 2.26 | 25.00 |





COUNTRY PERFORMANCE BASED ON BUYS AND SELLS

| Country | | | | | | | | | |
|---------------|-------|------------|--------|--------|-------------|------------|-------------|--------------------------|-------|
| | | Principal | No. of | No. of | Trade Cost | Trade Cost | Univ. Trade | Cost Diff. from Universe | |
| | Side | (Mil. \$) | Trades | Issues | (Thous. \$) | BP | Cost BP | (Thous. \$) | BP |
| UNITED STATES | BUYS | 387 | 391 | 154 | +337.87 | +8.74 | +7.15 | +61.67 | +1.59 |
| | SELLS | 403 | 458 | 204 | 349.07 | 8.67 | +5.41 | 566.66 | 14.08 |

Manager PERFORMANCE

| Manager PERFORMANCE | | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | |
|----------------------|-------------------------|------------------|------------------|---------------------------|------------------|------------------------|--|------|-----------------------------------|------------|------------|------------|
| Manager | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) BP | | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| METROPOLITAN WEST MG | 552 | 261 | 91 | 22.60 | 0.41 | +6.11 | 359.66 | 6.52 | +1.15 | 0.87 | 0.16 | 0.41 |
| NEUBERGER BERMAN | 216 | 522 | 201 | +16.21 | +0.75 | +6.83 | 131.52 | 6.08 | +1.51 | 1.36 | 0.20 | 2.07 |
| BARCLAYS 1-10 YR TIP | 21 | 66 | 26 | 4.82 | 2.32 | +4.32 | 13.81 | 6.64 | 2.44 | +0.01 | 2.57 | 2.88 |

BROKER PERFORMANCE

| BROKER PERFORMANCE | | | | | | | | | TRADE COST HISTORICAL PERFORMANCE | | | |
|---------------------|-------------------------|------------------|------------------|---------------------------|------------------|------------------------|--|-------|-----------------------------------|------------|------------|------------|
| BROKER | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) BP | | Q1 2017 | Q4 2016 | Q3 2016 | Q2 2016 |
| CREDIT SUISSE | 144 | 51 | 32 | 1.73 | 0.12 | +4.22 | 62.51 | 4.34 | +3.00 | 7.64 | 1.12 | 0.55 |
| NOMURA | 123 | 119 | 81 | 3.17 | 0.26 | +5.82 | 74.68 | 6.08 | +0.69 | 1.73 | 1.29 | 1.79 |
| JP MORGAN CHASE | 94 | 54 | 35 | 2.51 | 0.27 | +9.44 | 91.51 | 9.71 | +3.33 | +0.16 | 0.91 | 11.27 |
| GOLDMAN SACHS | 77 | 99 | 59 | +3.85 | +0.50 | +5.14 | 35.77 | 4.64 | 1.12 | 0.65 | +1.61 | +2.13 |
| BARCLAYS | 68 | 67 | 40 | 1.44 | 0.21 | +5.13 | 36.40 | 5.34 | +1.22 | +1.10 | 1.86 | +2.28 |
| CITIGROUP | 40 | 110 | 71 | +4.99 | +1.26 | +9.08 | 30.97 | 7.82 | +0.10 | 2.52 | 2.51 | 0.80 |
| RBS | 32 | 11 | 8 | 2.53 | 0.80 | +2.74 | 11.19 | 3.54 | +0.55 | 0.69 | - | - |
| BNP PARIBAS | 30 | 66 | 38 | 19.57 | 6.63 | +7.18 | 40.77 | 13.81 | 0.47 | 2.42 | +2.33 | 3.85 |
| DEUTSCHE BANK | 28 | 14 | 9 | +4.27 | +1.52 | +6.90 | 15.17 | 5.38 | +0.97 | +5.13 | 1.12 | 2.83 |
| BANK OF AMERICA | 25 | 48 | 38 | 3.47 | 1.41 | +8.20 | 23.62 | 9.61 | 0.56 | +0.16 | 2.36 | 1.49 |
| WELLS FARGO | 23 | 74 | 45 | 1.95 | 0.85 | +5.94 | 15.62 | 6.79 | 1.81 | 1.55 | 1.38 | 2.05 |
| MORGAN STANLEY | 21 | 36 | 28 | 1.15 | 0.56 | +8.63 | 18.91 | 9.19 | +1.67 | +3.49 | +6.63 | +0.98 |
| BMO CAPITAL MARKETS | 19 | 5 | 5 | +2.16 | +1.17 | +1.76 | 1.10 | 0.59 | +1.08 | +0.70 | +0.97 | - |
| RBC CAPITAL MARKETS | 17 | 21 | 17 | +3.92 | +2.37 | +7.16 | 7.94 | 4.79 | +1.90 | 8.01 | +1.81 | 0.15 |
| HSBC BANK | 10 | 6 | 4 | +1.03 | +1.07 | +7.11 | 5.81 | 6.04 | - | +2.17 | +0.36 | 0.03 |
| UBS | 8 | 25 | 22 | 3.92 | 4.65 | +9.10 | 11.58 | 13.75 | +1.93 | +1.98 | +7.24 | 2.61 |
| JEFFERIES & CO | 7 | 10 | 8 | +3.64 | +5.09 | +13.32 | 5.90 | 8.23 | +17.01 | 0.19 | +3.63 | +6.14 |
| BNY MELLON | 5 | 6 | 6 | +2.65 | +5.13 | +3.96 | +0.60 | +1.17 | +3.95 | - | +3.49 | +5.46 |
| PERSHING | 5 | 2 | 2 | +0.57 | +1.17 | +2.42 | 0.61 | 1.25 | +9.23 | 0.13 | +1.92 | 12.73 |
| CITADEL SECURITIES | 4 | 2 | 2 | 0.28 | 0.63 | +0.60 | 0.55 | 1.23 | - | - | - | - |

TRADE DETAILS

| Buy/Sell | Security | Bond Type | Trade Date/ Maturity | Manager/ Broker | Cty | Local Curr. | Principal (\$) | Price | Benchmark Price | Trade Cost BP | Trading Cost |
|-------------------------------|---|-----------|--------------------------|------------------------------------|-----|----------------|-------------------|---------|--------------------|------------------|--------------|
| 15 Highest Cost Trades | | | | | | | | | | | |
| B | 01F04267 FNCL 4.5 7/10 | Mtge | 06/06/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 8,476,995 | 107.781 | 107.224 | +51.70 | +43,828 |
| S | 912810RU US TREASURY N/B 11/46 2.875 | Govt | 04/03/2017 11/15/2046 | METROPOLITAN WE NOMURA | US | USD | 2,734,508 | 97.141 | 97.983 | +86.73 | +23,717 |
| S | 912828W8 US TREASURY N/B 03/22 1.875 | Govt | 05/24/2017 03/31/2022 | METROPOLITAN WE JP MORGAN CHASE | US | USD | 12,086,079 | 100.258 | 100.429 | +17.07 | +20,631 |
| B | 912828S5 TSY INFL IX N/B 07/26 0.125 | Govt | 04/07/2017 07/15/2026 | METROPOLITAN WE RBS | US | USD | 3,324,749 | 98.164 | 97.560 | +61.54 | +20,461 |
| B | 01F04065 FNCL 4 5/10 | Mtge | 04/07/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 3,625,734 | 105.094 | 104.530 | +53.66 | +19,455 |
| B | 01F04266 FNCL 4.5 6/09 | Mtge | 05/05/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 8,440,128 | 107.313 | 107.118 | +18.12 | +15,297 |
| B | 01F04268 FNCL 4.5 8/09 | Mtge | 06/28/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 8,433,983 | 107.234 | 107.080 | +14.44 | +12,181 |
| B | 01F03045 FNCL 3 5/11 | Mtge | 04/13/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 2,104,113 | 102.891 | 102.310 | +56.41 | +11,869 |
| B | 01F03047 FNCL 3 7/11 | Mtge | 06/13/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 2,102,835 | 102.828 | 102.277 | +53.65 | +11,281 |
| B | 912810RX US TREASURY N/B 05/47 3 | Govt | 05/15/2017 05/15/2047 | METROPOLITAN WE NOMURA | US | USD | 2,781,937 | 100.250 | 99.860 | +38.90 | +10,823 |
| B | 01F04067 FNCL 4 7/09 | Mtge | 06/08/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 3,638,132 | 105.453 | 105.153 | +28.46 | +10,354 |
| B | 01F05067 FNCL 5 7/09 | Mtge | 06/08/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 1,870,971 | 109.734 | 109.238 | +45.28 | +8,472 |
| B | 01F04066 FNCL 4 6/10 | Mtge | 05/05/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 3,619,265 | 104.906 | 104.661 | +23.38 | +8,461 |
| B | 912810RX US TREASURY N/B 05/47 3 | Govt | 05/18/2017 05/15/2047 | METROPOLITAN WE DEUTSCHE BANK | US | USD | 2,842,550 | 102.250 | 101.960 | +28.36 | +8,062 |



| | | | | | | | | | | | |
|---|-------------------------------------|------|--------------------------|------------------------------|----|-----|-----------|---------|--------|--------|--------|
| B | 912810RX US TREASURY N/B 05/47 3 | Govt | 05/15/2017 05/15/2047 | METROPOLITAN WE HSBC BANK | US | USD | 1,984,950 | 100.250 | 99.860 | +38.90 | +7,722 |
|---|-------------------------------------|------|--------------------------|------------------------------|----|-----|-----------|---------|--------|--------|--------|



TRADE DETAILS

| Buy/Sell | Security | Bond Type | Trade Date/ Maturity | Manager/ Broker | Cty | Local Curr. | Principal (\$) | Price | Benchmark Price | Trade Cost BP | Trading Cost |
|------------------------------|---|-----------|--------------------------|------------------------------------|-----|----------------|-------------------|---------|--------------------|------------------|--------------|
| 15 Lowest Cost Trades | | | | | | | | | | | |
| S | 01F04266 FNCL 4.5 6/09 | Mtge | 06/06/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 8,489,131 | 107.936 | 107.305 | 58.47 | 49,632 |
| S | 01F04265 FNCL 4.5 5/09 | Mtge | 05/05/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 8,455,489 | 107.508 | 107.186 | 29.93 | 25,310 |
| B | 912828XR US TREASURY N/B 05/22 1.75 | Govt | 05/24/2017 05/31/2022 | METROPOLITAN WE JP MORGAN CHASE | US | USD | 12,011,946 | 99.643 | 99.840 | 19.78 | 23,765 |
| B | 912810RV US TREASURY N/B 02/47 3 | Govt | 04/03/2017 02/15/2047 | METROPOLITAN WE NOMURA | US | USD | 2,743,125 | 99.750 | 100.602 | 85.41 | 23,429 |
| S | 912828XL TSY INFL IX N/B 07/25 0.375 | Govt | 04/07/2017 07/15/2025 | METROPOLITAN WE RBS | US | USD | 3,749,745 | 100.781 | 100.223 | 55.40 | 20,775 |
| S | 01F04267 FNCL 4.5 7/10 | Mtge | 06/28/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 8,443,815 | 107.359 | 107.138 | 20.67 | 17,451 |
| S | 01F04066 FNCL 4 6/10 | Mtge | 06/08/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 3,644,601 | 105.641 | 105.221 | 39.74 | 14,484 |
| S | 01F03065 FNCL 3 5/12 | Mtge | 05/04/2017 12/31/2099 | METROPOLITAN WE BNP PARIBAS | US | USD | 3,552,150 | 99.500 | 99.168 | 33.39 | 11,860 |
| S | 01F04264 FNCL 4.5 4/09 | Mtge | 04/10/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 4,046,051 | 107.465 | 107.155 | 28.83 | 11,665 |
| S | 912810RV US TREASURY N/B 02/47 3 | Govt | 05/15/2017 02/15/2047 | METROPOLITAN WE NOMURA | US | USD | 2,794,577 | 100.164 | 99.781 | 38.23 | 10,684 |
| S | 01F03066 FNCL 3 6/10 | Mtge | 06/07/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 1,889,611 | 100.779 | 100.263 | 51.23 | 9,681 |
| S | 01F03046 FNCL 3 6/12 | Mtge | 06/13/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 2,105,071 | 102.938 | 102.478 | 44.69 | 9,407 |
| S | 01F04264 FNCL 4.5 4/09 | Mtge | 04/07/2017 12/31/2099 | METROPOLITAN WE CITIGROUP | US | USD | 2,227,756 | 107.621 | 107.169 | 42.04 | 9,365 |
| S | 01F05066 FNCL 5 6/09 | Mtge | 06/08/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 1,872,169 | 109.805 | 109.276 | 48.19 | 9,023 |
| S | 01F04064 FNCL 4 4/09 | Mtge | 04/07/2017 12/31/2099 | METROPOLITAN WE CREDIT SUISSE | US | USD | 3,632,607 | 105.293 | 105.051 | 23.01 | 8,359 |



AGENCIES



BOND TYPE PERFORMANCE

| Bond Type | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost | Trade Cost | Univ. Trade | Cost Diff. from Universe | |
|------------|-------------------------|------------------|---------------|-------------|------------|-------------|--------------------------|-------|
| | | | | (Thous. \$) | BP | Cost BP | (Thous.\$) | BP |
| CORPORATES | 45 | 79 | 71 | +18.41 | +4.11 | +14.47 | 46.36 | 10.36 |

CORPORATES



BOND TYPE PERFORMANCE

| Bond Type | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe | |
|-------------|-------------------------|------------------|---------------|---------------------------|------------------|------------------------|--------------------------|------|
| | | | | | | | (Thous.\$) | BP |
| GOVERNMENTS | 399 | 256 | 85 | +7.91 | +0.20 | +6.19 | 238.96 | 5.99 |

GOVERNMENTS



BOND TYPE PERFORMANCE

| Bond Type | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe | |
|-----------|-------------------------|------------------|---------------|---------------------------|------------------|------------------------|--------------------------|------|
| | | | | | | | (Thous.\$) | BP |
| MORTGAGES | 345 | 513 | 120 | 40.45 | 1.17 | +5.21 | 220.00 | 6.38 |

MORTGAGES



BOND TYPE PERFORMANCE

| Bond Type | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous.\$) | BP |
|------------|------------------------|------------------|------------------|---------------------------|------------------|------------------------|--|-------|
| MUNICIPALS | <1 | 1 | 1 | +2.93 | +34.00 | +30.23 | +0.32 | +3.77 |



RATING BY EACH BOND TYPE

GOVERNMENTS - RATING DETAILS

| Rating | Principal | No. of | No. of Issues | Trade Cost | Trade Cost | Univ. Trade | Cost Diff. from Universe | |
|--------|------------|--------|---------------|-------------|------------|-------------|--------------------------|------|
| | (Mil. \$) | Trades | | (Thous. \$) | BP | Cost BP | (Thous. \$) | BP |
| AAA | 399 | 256 | 85 | +7.91 | +0.20 | +6.19 | 238.96 | 6.00 |

RATING BY EACH BOND TYPE

MORTGAGES - RATING DETAILS

| Rating | Principal | No. of | No. of Issues | Trade Cost | Trade Cost | Univ. Trade | Cost Diff. from Universe | |
|--------|------------|--------|---------------|-------------|------------|-------------|--------------------------|-------|
| | (Mil. \$) | Trades | | (Thous. \$) | BP | Cost BP | (Thous. \$) | BP |
| NR | 342 | 511 | 118 | 34.84 | 1.02 | +5.15 | 211.14 | 6.17 |
| AAA | 3 | 2 | 2 | 5.61 | 22.07 | +12.76 | 8.86 | 34.84 |

RATING BY EACH BOND TYPE

CORPORATES - RATING DETAILS

| Rating | Principal (Mil. \$) | No. of Trades | No. of Issues | Trade Cost | | Univ. Trade | | Cost Diff. from Universe | |
|--------|-------------------------|------------------|---------------|-------------|--------|-------------|-------------|--------------------------|--|
| | | | | (Thous. \$) | BP | Cost BP | (Thous. \$) | BP | |
| A | 10 | 12 | 11 | 1.96 | 1.95 | +16.06 | 18.14 | 18.01 | |
| BBB+ | 10 | 17 | 16 | +11.01 | +11.15 | +14.68 | 3.49 | 3.53 | |
| BBB- | 6 | 12 | 12 | +0.84 | +1.45 | +11.78 | 5.98 | 10.33 | |
| BBB | 6 | 8 | 8 | +5.85 | +10.40 | +16.18 | 3.25 | 5.78 | |
| A- | 5 | 9 | 8 | +2.06 | +4.07 | +17.06 | 6.59 | 13.00 | |
| AAA | 4 | 7 | 6 | +1.25 | +3.12 | +8.51 | 2.15 | 5.39 | |
| AA- | 2 | 3 | 3 | 0.77 | 4.34 | +12.61 | 2.99 | 16.94 | |
| A+ | 1 | 2 | 2 | +0.38 | +2.54 | +11.21 | 1.29 | 8.66 | |
| AA+ | <1 | 1 | 1 | +0.00 | +0.00 | +12.53 | 0.88 | 12.53 | |
| BB | <1 | 4 | 1 | 0.43 | 27.89 | +56.01 | 1.31 | 83.90 | |
| CCC+ | <1 | 2 | 1 | +0.08 | +6.89 | +12.52 | 0.06 | 5.63 | |
| BB+ | <1 | 2 | 2 | +0.10 | +9.49 | +30.17 | 0.22 | 20.68 | |



RATING BY EACH BOND TYPE

MUNICIPALS - RATING DETAILS

| Rating | Principal | No. of | No. of Issues | Trade Cost | Trade Cost | Univ. Trade | Cost Diff. from Universe | |
|--------|------------|--------|---------------|-------------|------------|-------------|--------------------------|-------|
| | (Mil. \$) | Trades | | (Thous. \$) | BP | Cost BP | (Thous. \$) | BP |
| AA- | <1 | 1 | 1 | +2.93 | +34.00 | +30.23 | +0.32 | +3.77 |

HISTORICAL DATA

| Quarter | Principal (Thous. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe (Thous. \$) | BP |
|-----------------------|--------------------------|------------------|------------------|---------------------------|------------------|------------------------|---|-------|
| 04/01/2017-06/30/2017 | 789,018 | 849 | 277 | 11.21 | 0.14 | +6.26 | 504.99 | 6.40 |
| 01/01/2017-03/31/2017 | 710,311 | 779 | 281 | +88.61 | +1.25 | +7.07 | 413.59 | 5.82 |
| Year-Ending 2017 | 1,499,329 | 1628 | | +77.41 | +0.52 | +6.64 | 918.58 | 6.13 |
| 10/01/2016-12/31/2016 | 711,667 | 646 | 221 | 68.72 | 0.97 | +6.26 | 514.24 | 7.23 |
| 07/01/2016-09/30/2016 | 589,731 | 684 | 203 | 14.71 | 0.25 | +6.35 | 389.30 | 6.60 |
| 04/01/2016-06/30/2016 | 619,130 | 801 | 269 | 67.81 | 1.10 | +8.74 | 608.75 | 9.84 |
| 01/02/2016-03/31/2016 | 710,978 | 1117 | 262 | 193.39 | 2.72 | +6.08 | 625.45 | 8.80 |
| Year-Ending 2016 | 2,631,505 | 3248 | | 344.62 | 1.31 | +6.81 | 2,137.74 | 8.12 |
| 10/01/2015-12/31/2015 | 820,526 | 980 | 212 | 138.86 | 1.69 | +8.52 | 837.57 | 10.21 |
| 07/01/2015-09/30/2015 | 992,841 | 1625 | 204 | 225.86 | 2.27 | +3.74 | 596.77 | 6.01 |
| 04/01/2015-06/30/2015 | 1,141,971 | 1504 | 246 | 310.14 | 2.72 | +7.36 | 1,150.64 | 10.08 |
| 01/01/2015-03/31/2015 | 944,141 | 1100 | 191 | 8.38 | 0.09 | +6.57 | 628.26 | 6.66 |
| Year-Ending 2015 | 3,899,478 | 5209 | | 683.23 | 1.75 | +6.49 | 3,213.25 | 8.24 |
| 10/01/2014-12/31/2014 | 676,216 | 885 | 213 | +41.55 | +0.61 | +5.86 | 354.40 | 5.25 |
| 07/01/2014-09/30/2014 | 905,295 | 785 | 133 | +534.89 | +5.91 | +6.85 | 85.46 | 0.94 |
| 04/01/2014-06/30/2014 | 727,152 | 957 | 240 | 48.64 | 0.67 | +7.04 | 560.46 | 7.71 |
| 01/02/2014-03/31/2014 | 920,513 | 1033 | 210 | 131.04 | 1.42 | +6.54 | 733.34 | 7.96 |
| Year-Ending 2014 | 3,229,176 | 3660 | | +396.76 | +1.23 | +6.60 | 1,733.66 | 5.37 |
| 10/01/2013-12/31/2013 | 804,252 | 799 | 216 | 45.80 | 0.57 | +5.50 | 487.92 | 6.07 |
| 07/01/2013-09/30/2013 | 778,379 | 825 | 214 | +21.56 | +0.28 | +6.25 | 465.02 | 5.97 |
| 04/01/2013-06/30/2013 | 937,180 | 803 | 217 | 51.74 | 0.55 | +7.82 | 784.80 | 8.37 |
| 01/02/2013-03/31/2013 | 635,964 | 613 | 190 | +89.06 | +1.40 | +8.12 | 427.14 | 6.72 |
| Year-Ending 2013 | 3,155,775 | 3040 | | +13.07 | +0.04 | +6.90 | 2,164.88 | 6.86 |
| 10/01/2012-12/31/2012 | 528,034 | 613 | 192 | 215.02 | 4.07 | +7.49 | 610.46 | 11.56 |

HISTORICAL DATA

| Quarter | Principal (Thous. \$) | No. of Trades | No. of Issues | Trade Cost (Thous. \$) | Trade Cost BP | Univ. Trade Cost BP | Cost Diff. from Universe | |
|-----------------------|--------------------------|------------------|---------------|---------------------------|------------------|------------------------|--------------------------|-------|
| | | | | | | | (Thous. \$) | BP |
| 07/01/2012-09/30/2012 | 567,084 | 722 | 230 | +18.83 | +0.33 | +8.56 | 466.39 | 8.23 |
| 04/01/2012-06/30/2012 | 520,106 | 739 | 204 | +102.98 | +1.98 | +8.39 | 333.44 | 6.41 |
| 01/02/2012-03/31/2012 | 136,055 | 131 | 54 | +29.91 | +2.20 | +7.08 | 66.46 | 4.88 |
| Year-Ending 2012 | 1,751,279 | 2205 | | 63.30 | 0.36 | +8.07 | 1,476.76 | 8.43 |
| 10/01/2011-12/31/2011 | 91,474 | 88 | 43 | 18.39 | 2.01 | +6.04 | 73.67 | 8.05 |
| 07/01/2011-09/30/2011 | 101,872 | 106 | 49 | 47.22 | 4.64 | +4.74 | 95.51 | 9.38 |
| 04/01/2011-06/30/2011 | 100,523 | 97 | 54 | 4.28 | 0.43 | +4.90 | 53.56 | 5.33 |
| 01/02/2011-03/31/2011 | 205,267 | 171 | 56 | 143.81 | 7.01 | +7.08 | 289.08 | 14.09 |
| Year-Ending 2011 | 499,136 | 462 | | 213.70 | 4.28 | +5.97 | 511.82 | 10.25 |
| 10/01/2010-12/31/2010 | 184,240 | 138 | 57 | 8.71 | 0.47 | +5.73 | 114.34 | 6.20 |
| 07/01/2010-09/30/2010 | 219,586 | 151 | 60 | 20.80 | 0.95 | +4.97 | 129.88 | 5.92 |
| 04/01/2010-06/30/2010 | 161,213 | 123 | 50 | +101.24 | +6.28 | +7.34 | 17.15 | 1.06 |
| 01/02/2010-03/31/2010 | 221,701 | 181 | 70 | +60.21 | +2.72 | +11.49 | 194.49 | 8.77 |
| Year-Ending 2010 | 786,740 | 593 | | +131.95 | +1.68 | +7.47 | 455.85 | 5.79 |



BENCHMARK VENDOR REPORT

| Bonds | Number of Trades | Number of Issues | Vendor Benchmark | Percent Of Principal |
|-------------|------------------|------------------|-------------------------|----------------------|
| CORPORATES | 68 | 62 | BLOOMBERGTERMINAL | 83.34 % |
| | 9 | 9 | ISSUE PRICE | 13.62 % |
| | 2 | 2 | MARKETAXESS-SUMMARYDATA | 3.05 % |
| GOVERNMENTS | 255 | 84 | BLOOMBERGTERMINAL | 99.90 % |
| | 1 | 1 | ISSUE PRICE | 0.10 % |
| MORTGAGES | 337 | 51 | TULLET PREBON | 69.82 % |
| | 176 | 69 | BLOOMBERGTERMINAL | 30.18 % |
| MUNICIPALS | 1 | 1 | MSRB-TRADES | 100.00 % |

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