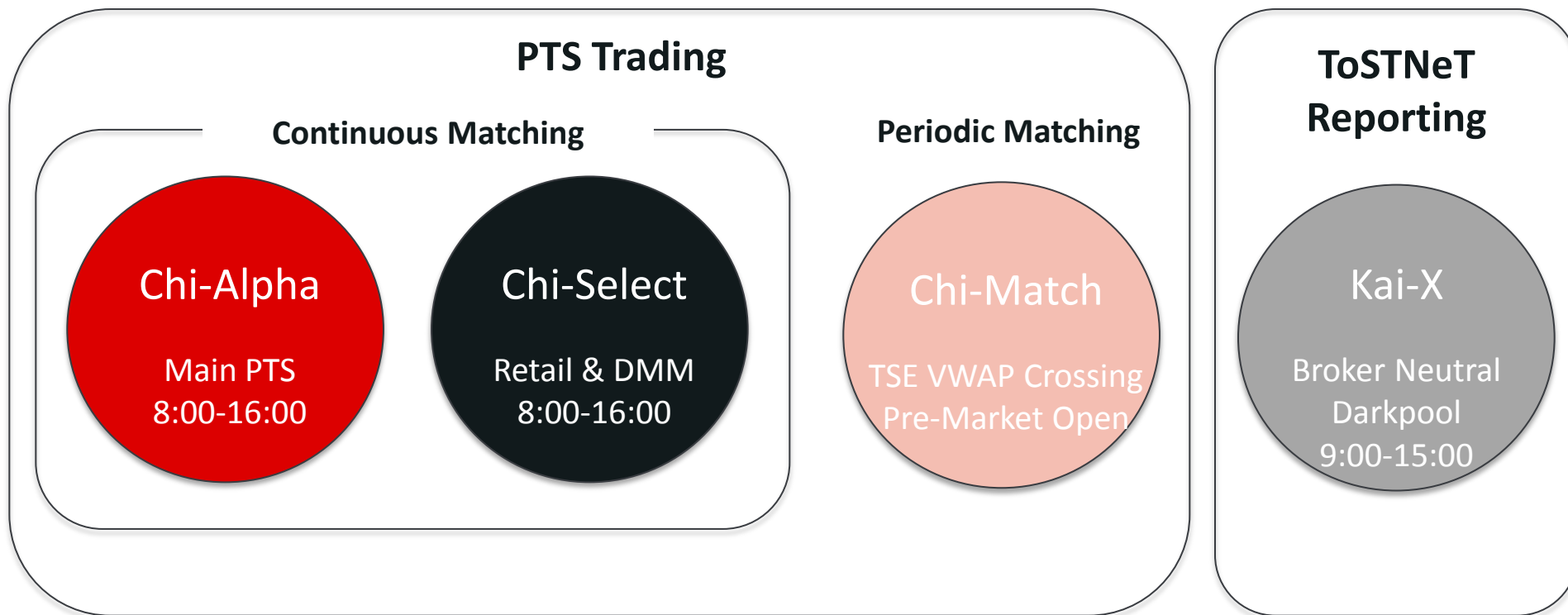


A black and white photograph of grass blades covered in water droplets, serving as the background for the report cover. The top half of the image is obscured by a red banner.

CHI-X JAPAN MONTHLY REPORT

MARCH 2018

Markets operated by Chi-X Japan

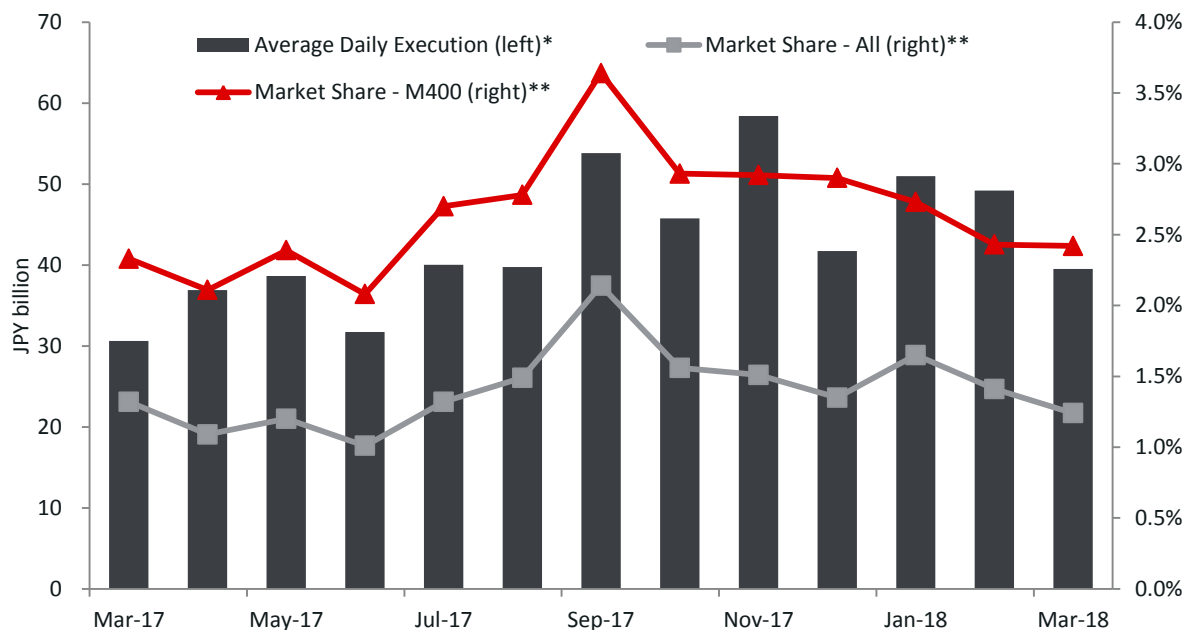


Chi-Alpha & Select

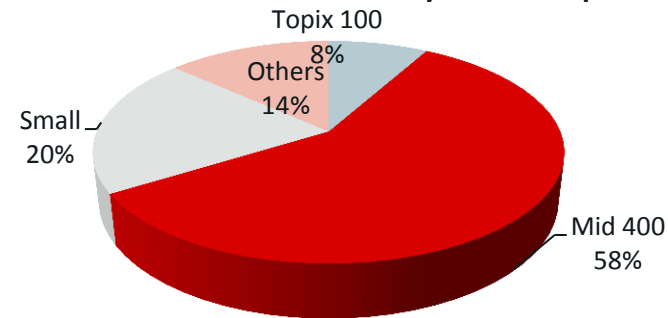
Overview - Chi-Alpha & Chi-Select

- ◆ Chi-Alpha is the largest and longest operating among venues run by Chi-X Japan
- ◆ Chi-Select is catered to retail focused brokers with features allowing them to provide their clients with better best execution
- ◆ Key Features
 - ✓ Continuous matching between 8am to 4pm for stocks listed on TSE
 - ✓ Various order types – Pegged, Post-only, Iceberg, IOC/FOK
 - ✓ Robust, resilient, stable, low latency platform
- ◆ Values
 - ✓ Price Improvement opportunities, esp. Mid/Small Caps
 - ✓ Market making / Order posting opportunities
 - ✓ Faster / higher execution opportunities

Statistics - Chi-Alpha & Chi-Select



Execution Value Breakdown by Market Cap



| | Average Price Improvement (PI) (bps) *** | Market Share** |
|----------------|--|----------------|
| TOPIX100 | 0.4 | 0.3% |
| Mid 400 | 2.6 | 2.4% |
| Small | 3.1 | 2.0% |
| Others | 4.1 | 1.0% |
| Overall | 2.9 | 1.2% |

* Chi-Alpha & Chi-Select combined
 ** Market share of Chi-X's 2 markets among lit markets (TSE, Chi-Alpha, Chi-Select, JNX-J and JNX-X)
 *** PI compares the execution price vs. TSE's best bid for sell or best offer for buy at each point of execution and is calculated from the perspective of the Taker of the trade



Statistics - Chi-Alpha & Chi-Select

Top Symbols by Execution (JPY)*

| | | |
|------|----------|----------------|
| 1570 | NIKKEILV | 10,286,522,689 |
| 6502 | TOSHIBA | 9,458,165,200 |
| 6506 | YASKAWA | 7,367,157,270 |
| 3436 | SUMCO | 6,643,867,550 |
| 4689 | YAHOO J | 5,891,070,170 |
| 6762 | TDK | 5,694,893,400 |
| 4005 | SMICHEM | 5,330,320,000 |
| 4004 | SHOWDEN | 5,160,906,650 |
| 2267 | YAKULT | 5,076,016,700 |
| 4751 | CYBER A | 4,632,563,970 |

Top Symbols by Market Share (%)**

| | | |
|------|----------|-----|
| 3468 | STARASIA | 8.0 |
| 3226 | ACCOMMO | 7.1 |
| 3296 | NP REIT | 6.4 |
| 9603 | H.I.S. | 6.3 |
| 8955 | JPN-PRI | 6.2 |
| 8951 | NBF | 6.1 |
| 8972 | KENEDIXO | 6.0 |
| 8952 | JRE | 5.8 |
| 3600 | FUJIX | 5.7 |
| 2726 | PALGHD | 5.6 |

* Chi-Alpha & Chi-Select combined

** Market share of Chi-X's 2 markets among lit markets (TSE, Chi-X, SBI JNX); Chi-X Japan's estimate

Chi-Match

chi-x

Overview – Chi-Match

- ◆ Chi-Match allows participants to find counterparties to trade at TSE's VWAP before the market open, hence **offload the trading risk in the continuous matching hours.**
- ◆ How does it work?

Order acceptance (from 8 to each pre-matching time)

- Order Type: Full-day VWAP / PM VWAP / AM VWAP

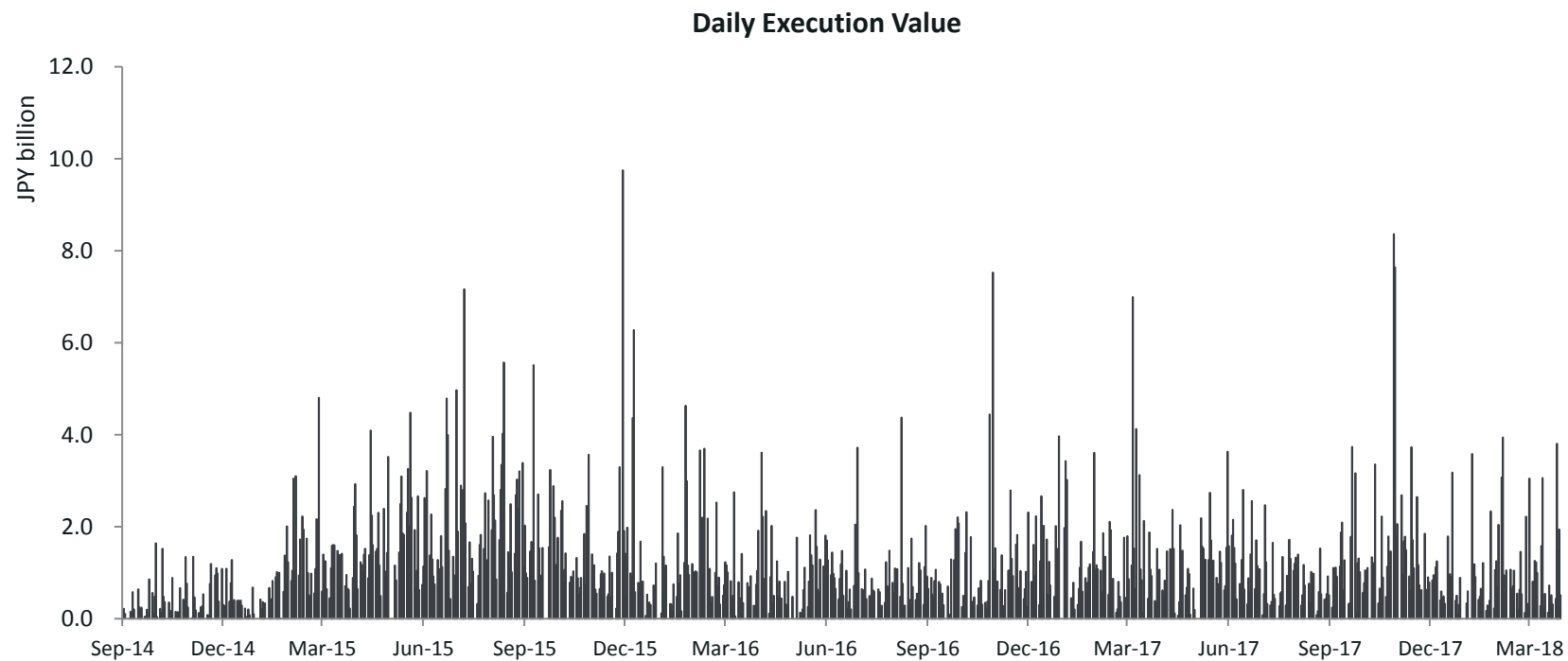
Pre-matching time / Sessions

- Full-day VWAP : 8:33, 8:45, 8:52, 8:56
- PM VWAP : 12:15, 12:25
- AM VWAP : 8:45, 8:52

Trade execution (after market close)

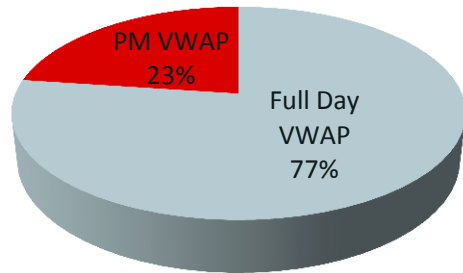
Chi-Match Execution Trend

- ◆ Spikes on major index rebalance days (MSCI, TOPIX, N225) and SQ days

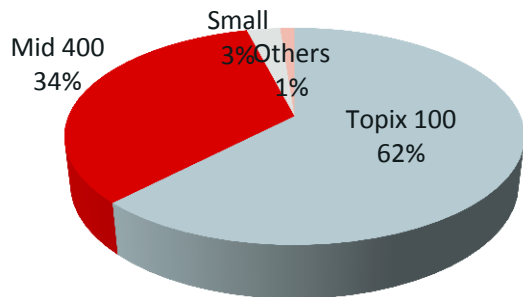


Chi-Match Execution Snapshot

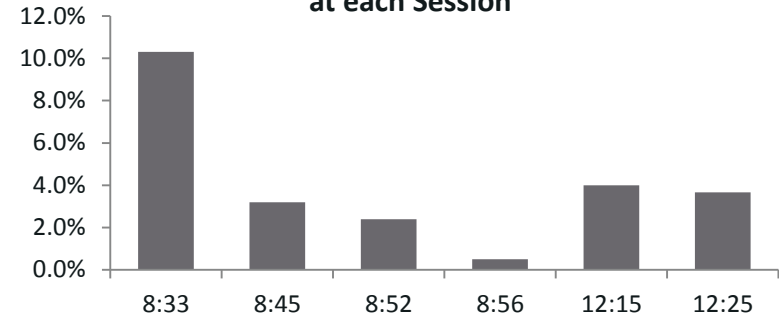
Execution Value Breakdown by VWAP Type



Execution Value Breakdown by Index



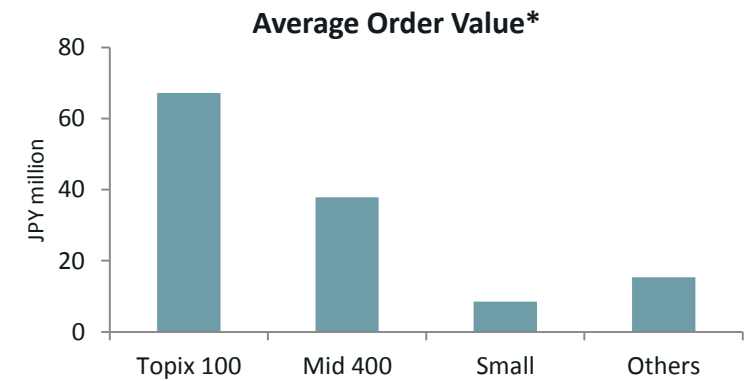
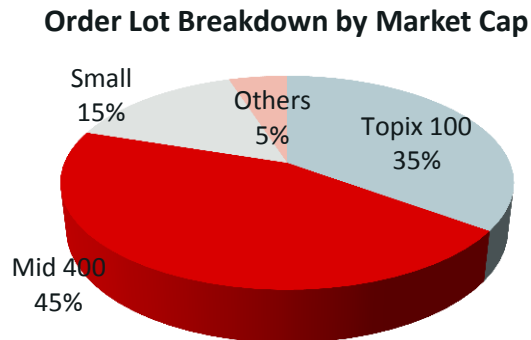
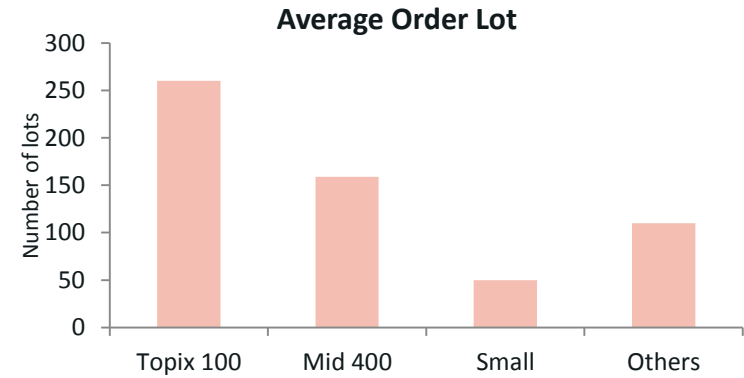
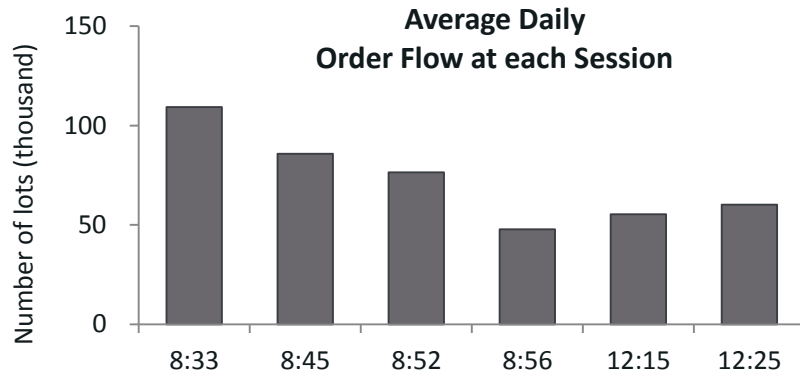
Execution Ratio (Trade lot/Order lot)
at each Session



Top Symbols by Execution Value (JPY)

| | | |
|------|----------|-------------|
| 6326 | KUBOTA | 822,180,290 |
| 7203 | TOYOTA | 728,296,632 |
| 8053 | SMITOMO | 699,788,319 |
| 5401 | NSTEELSM | 680,937,415 |
| 6752 | PANASNIC | 656,829,419 |
| 8308 | RESONA | 593,561,961 |
| 6501 | HITACHI | 495,837,594 |
| 9064 | YAMATOHD | 482,485,407 |
| 6724 | EPSON | 434,179,261 |
| 5938 | LIXIL G | 430,192,660 |

Chi-Match Order Snapshot



* Base price is used to calculate order value

Kai-X

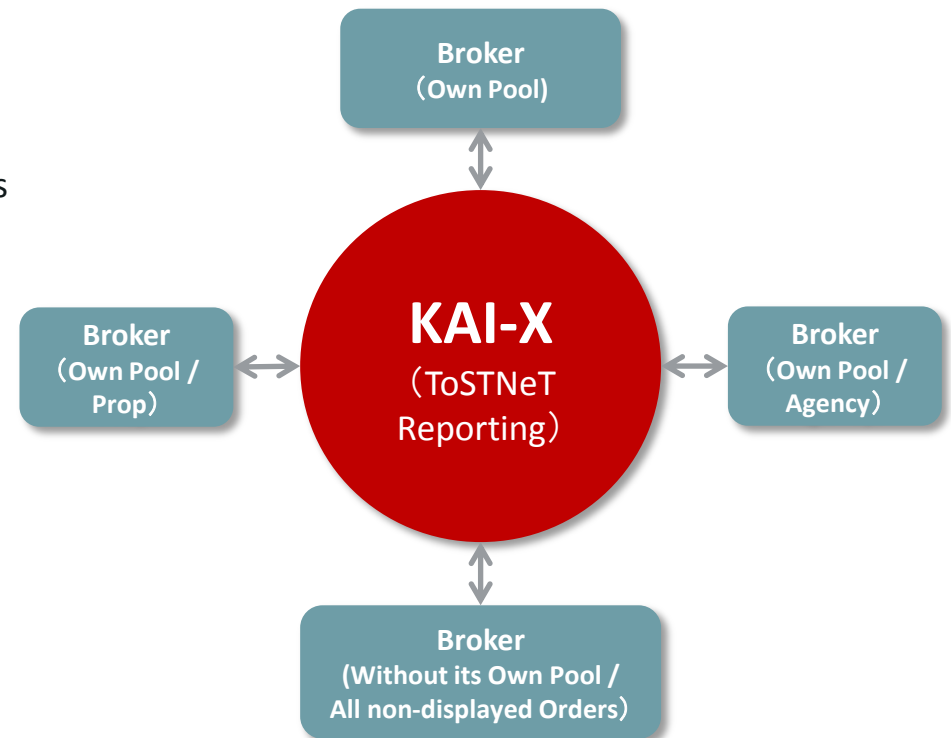
chi-x

Overview - Kai-X

- ◆ Kai-X is a **matching system for participant brokers' non-displayed orders**
- ◆ It enables brokers to source **additional liquidity from others without disclosing their order flows**. It also serves as **"outsourcing" of dark pool** for brokers who wish to reduce system development and maintenance cost

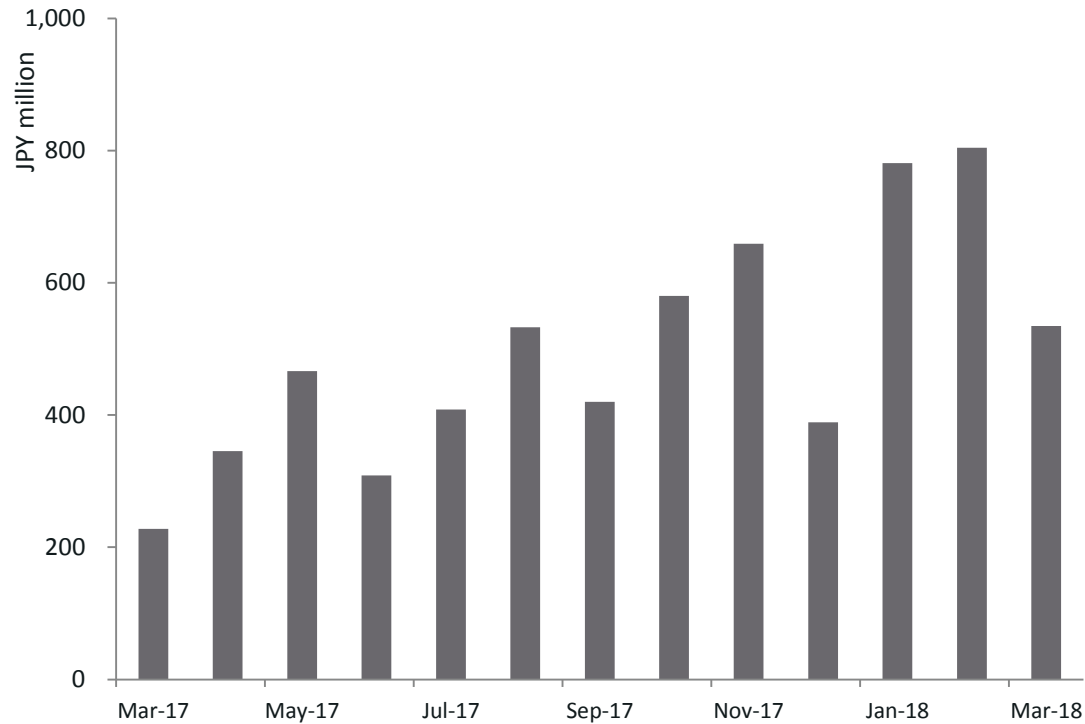
Key Features

- Within TSE BBO matching
 - ✓ TSE BBO's mid; near side; far side
 - ✓ High/Low limit price can be set
 - ✓ Day/IOC/FOK
- Matching priority: "Price" → "Broker" → "Time"
- Minimum Execution Quantities (MEQ) is available
- FIX access only
- Risk control features
 - ✓ Outside TSE high & low trade prevention
 - ✓ Self trade prevention (optional)

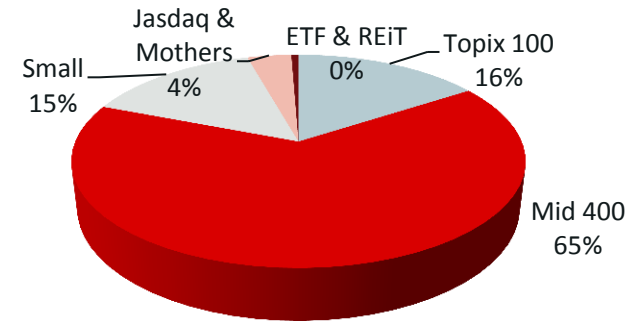


Kai-X Execution Snapshot

Average Daily Execution Value



Execution Value Breakdown by Market Cap

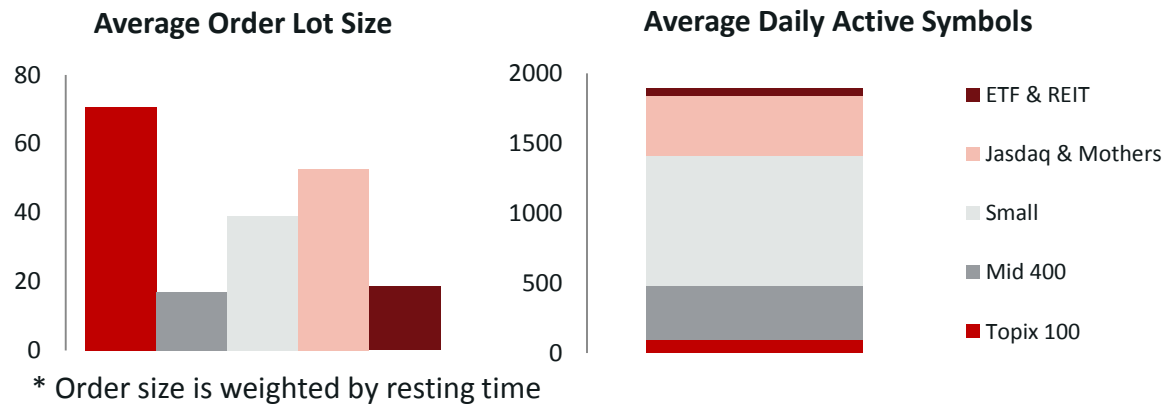
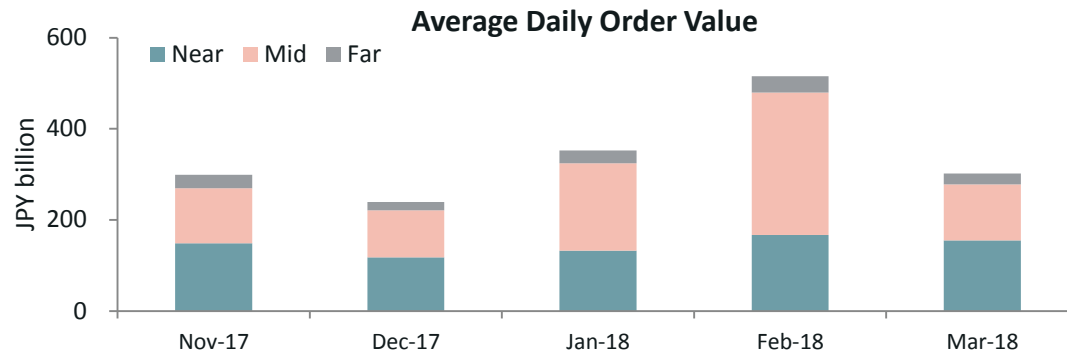


Average PI (bps)*

| | |
|------------------|-------------|
| TOPIX100 | 1.4 |
| M400 | 5.6 |
| Small | 11.0 |
| JASDAQ & Mothers | 31.7 |
| ETF & REITS | 2.3 |
| Overall | 10.4 |

* PI compares the execution price vs. TSE's best bid for sell or best offer for buy at each point of execution and is calculated from the perspective of the Taker of the trade

Kai-X Order Snapshot



Top Symbols by Order Lot Size (TOPIX100)

| | | |
|------|---------|-----|
| 9503 | KEPCO | 163 |
| 9202 | ANA | 54 |
| 7202 | ISUZU | 44 |
| 8306 | MUFG | 38 |
| 4755 | RAKUTEN | 37 |
| 8308 | RESONA | 34 |
| 8309 | SMTRUST | 31 |
| 7741 | HOYA | 28 |
| 5020 | JXTG | 27 |
| 7011 | MHI | 21 |

Top Symbols by Order Lot Size (Mid400)

| | | |
|------|----------|-----|
| 6473 | JTEKT | 711 |
| 8473 | SBI | 118 |
| 8358 | SURGABK | 107 |
| 4732 | USS | 105 |
| 1911 | SMI-FOR | 68 |
| 6141 | DMG MORI | 65 |
| 4676 | FUJI HD | 65 |
| 4613 | KANSAIP | 59 |
| 8184 | SIMACHU | 55 |
| 7832 | BANNAMHD | 52 |

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