TO: File No. S7-02-10
FROM: Cristie L. March, Senior Adviser
Office of the Chairman
DATE: April 10, 2013
SUBJECT: Meeting with Representatives from NASDAQ OMX Group, NYSE Euronext, and BATS Global Markets, Inc.

On April 9, 2013, Chairman Walter, Cristie March, John Ramsay and James Burns met with Bob Greifeld (CEO and President, NASDAQ OMX Group), Ed Knight (General Counsel, NASDAQ OMX Group), Duncan Niederauer (CEO and Director, NYSE Euronext), and Joe Ratterman (President and CEO, BATS Global Markets, Inc.) to discuss market structure issues, including the attached presentation.

Attachment
U.S. Market Structure Update

April 9, 2013
SUMMARY POINTS

• TRF at Record Levels
  • Significant growth in recent years, and especially recent months
  • Detrimental implications for the public markets – foreign markets taking action
  • Average dark pool order size similar to Exchanges at approx. 200 shares

• Impact on Market Quality
  • In the U.S., deterioration in displayed liquidity; wider spreads/more volatility in securities with higher TRF
  • In Canada, restrictions result in market quality improvement
  • In Australia, regulatory taskforce sees market quality erosion from dark trading

• Why is This Occurring?
  • Economics a significant driver
  • Regulatory landscape facilitates/encourages off-Exchange trading
TRF-share of trading has increased in the last five years, from 15% of total trading to over 35%.

Since September 2012, TRF levels have exceeded 35% on 64 (out of 140) days.

Number of Securities: The number of securities with >40% “TRF” share has more than doubled in the past year to over 49% of total stocks.

Source: CTA, UTP
WHY IS THIS OCCURRING?

Non-Exchanges are uniquely able to utilize different practices:

- Customer segmentation;
- Ability to trade at the NBBO without quoting;
- Ability to offer de minimis price improvement;
- No pre-trade, and limited post-trade, transparency;
- IOI structure and selectivity;
- Lack of affirmative regulatory obligations including the rulemaking process and publicly-disclosed rules;
- Less regulatory oversight of participants and cost;
- Reduced transparency and higher profitability further incentivizes liquidity.
WHY IS THIS OCCURRING?

- Much of the activity lacks "price improvement"
- Lit exchange mid-point orders offer substantial price improvement.
- NYSE Retail price improvement exceeds average TRF ($0.0016 vs. $0.0011), highlighting benefits of multiple competing liquidity providers.

U.S. Equity Off-Exchange Price Improvement Analysis

Percent of shares executed

<table>
<thead>
<tr>
<th>Percent of shares executed</th>
<th>NBBO or &lt; 10%</th>
<th>at the NBBO</th>
<th>&lt; 10% P.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Price improvement relative to the NBBO quoted spread

- Less than 30% of all shares executed away from the lit Exchanges were provided material price improvement (i.e. at least 10% of the spread).

Source: U.S. Consolidated Tape, January 2013
IMPACT ON MARKET QUALITY - STUDIES


- Dark Pools, Internalization, and Equity Market Quality – CFA Institute (2012)

- The Impact of Dark Trading and Visible Fragmentation on Market Quality – Degryse, de Jong, and van Kervel (2011)

- Dark Trading and Price Discovery – Comerton-Forde and Putnins (2012)

HIGH TRF SHARE = WORSE U.S. MARKET QUALITY

- Issues with high TRF share show consistently wider spreads and higher intraday volatility.

Source: calculations based on CTA, UTP as of January 2013
COST OF PROVIDING LIQUIDITY MORE ADVERSE ON EXCHANGES – NEGATIVE FOR MARKET QUALITY

Relative Contribution to Price Discovery
TRF should contribute 30% based on market share.

Cost to Access Liquidity (Take)
And Revenue to Provide Liquidity (Make)

Take Cost
Including Price Improvement
Cost of Providing
Liquidity
Make Revenue
Including Rebate
Sample of 120 NYSE and NASDAQ stocks
January 1 to March 31, 2011

Realized Spreads

Cost-Benefit Analysis does not hold up:
- Investors are not getting any material price improvement from TRF trading (Benefit to investors = small)
- Incentives to provide liquidity in public markets are minimal as a result of “toxic” order flow creating more volatile market conditions. This materially decreases overall market quality and impairs the public market price discovery process (Cost to investors = high)

Note: Nasdaq data sourced through different vendor in late 2011
Source: calculations based on CTA, UTP, SEC 605 data
Market quality improvements since Canadian rule change on dark liquidity implemented in October 2012

Change Implemented:
- Meaningful price improvement (generally 1c) or size threshold (50 round lots or C$100K) requirements to internalize

Main Results:
- Quoted spread down 25%
- Volatility down 17%

Source: Canadian consolidated tape
AUSTRALIAN REGULATORY REPORT ON DARK LIQUIDITY (MARCH 18, 2013)

- **Dark Liquidity**
  - 25-30% volume is dark trading in Australian markets.
  - *Taskforce concluded dark trading is impairing market quality: wider spreads, less depth.*

- **Market Integrity and Fairness**
  - *Regulate crossing systems like traditional markets*
  - Crossing systems must 1) have transparent procedures, 2) make user disclosures, 3) monitor trading misconduct, 4) have system and control requirements, 5) not unfairly discriminate between users, 6) allow clients to opt out of crossing system, 7) give client priority, 8) prevent payment for order flow, 9) put controls around soft dollar incentives

- **Note:** two out of three of the main studies utilized were based on the U.S. marketplace

SUGGESTED STRUCTURAL CHANGE

- While holistic reform may also be warranted, we believe this is the time to introduce an obligation in order to trade based on the publicly quoted price (a "trade-at" rule)*

- This would take the form of a meaningful, minimum price improvement standard
  - Re-aligns incentives to contribute to price discovery
  - Rewards liquidity posters
  - A block exemption could be warranted

* Where the participant doesn't have a pre-existing quote in the marketplace