**Bloomberg**
**TRADEBOOK LLC**
Member of FINRA/SIPC/NFA

**December 22, 2014**

**Via email: rule-comments@sec.gov**

Brent J. Fields
Secretary
U.S. Securities and Exchange Commission
100 F Street NE
Washington, DC 20549-1090

**COMMENT LETTER AND PETITION FOR PLAN AMENDMENT**

**Re: Joint Industry Plan; BATS Exchange, Inc., BATS Y-Exchange, Inc., Chicago Stock Exchange, Inc., EDGA Exchange, Inc., EDGX Exchange, Inc., Financial Industry Regulatory Authority, Inc., NASDAQ OMX BX, Inc., NASDAQ OMX PHLX LLC, The Nasdaq Stock Market LLC, New York Stock Exchange LLC, NYSE MKT LLC, and NYSE Arca, Inc.; Notice of Filing of Proposed National Market System Plan to Implement a Tick Size Pilot Program On a One-Year Pilot Basis ("Notice"); Release No. 34-73511; File No. 4-657**

Dear Secretary Fields:

Bloomberg Tradebook LLC ("Tradebook")[1] appreciates the opportunity to comment on the above-captioned plan under which BATS Exchange, Inc., BATS Y-Exchange, Inc., Chicago Stock Exchange, Inc., EDGA Exchange, Inc., EDGX Exchange, Inc., Financial Industry Regulatory Authority, Inc. ("FINRA"), NASDAQ OMX BX, Inc., NASDAQ OMX PHLX LLC, The Nasdaq Stock Market LLC, New York Stock Exchange LLC, NYSE MKT LLC, and NYSE Arca, Inc. ("Participants") proposed a national market system ("NMS") plan to implement a tick size pilot program ("Proposed Plan"). The Participants submitted the Proposed Plan in response to a U.S. Securities and Exchange Commission ("Commission") order pursuant to Section 11A(a)(3)(B) of the Securities Exchange Act of 1934 ("Act" or "Exchange Act")[2] and Rule 608

---

1 Bloomberg Tradebook LLC is a registered broker-dealer, operates an Alternative Trading System ("ATS") registered with the SEC, is a member of FINRA, Inc., and is a wholly-owned subsidiary of Bloomberg L.P.

2 15 U.S.C. § 78k-1(a)(3)(B).

thereunder,[3] directing the Participants to act jointly in developing and filing with the Commission a NMS plan to implement a pilot program ("Tick Pilot") that, among other things, would widen the quoting and trading increment for certain small capitalization stocks ("Order").

The Jumpstart Our Business Startups Act ("JOBS Act") required the Commission to do a decimalization study, which ultimately led to a roundtable and recommendations for a tick pilot. The Congressional intent behind the study was to assist smaller capitalization companies with a Commission review of how decimalization affected the number of initial public offerings and the liquidity and trading of their securities. Through the Decimalization Roundtable on February 5, 2013, came recommendations for a pilot program to test the impact of wider tick sizes on liquidity in small capitalization companies. Tradebook supports the Commission's efforts in this regard and believes that it is best that the Commission, industry, and academics work on a plan to evaluate the impact of wider tick sizes, rather than Congress through legislation. Facilitating capital formation is an extremely important tenet of the Commission's mission and the Commission should proactively seek to improve the market for these less liquid securities with a workable plan. Tradebook strongly agrees with Commissioner Piwowar's recent remarks that it is "clear that one size fits all approach to market structure is not working for small capitalization companies."[4]

That is why Tradebook is supportive of a Tick Pilot to evaluate, on a short-term basis, whether wider minimum tick sizes for small capitalization stocks would enhance market quality to the benefit of market participants, issuers, and U.S. investors. Tradebook commends the Commission for putting forth an Order with the goal of achieving enhanced market quality for these securities. At the same time however, Tradebook has concerns with certain portions of the Order. In addition, Tradebook has critical concerns about the Participants' Proposed Plan, which is a significant divergence from the Order, and must be addressed to render the Tick Pilot successful. Tradebook seeks improvement upon the Proposed Plan so that the Tick Pilot will become a robust vehicle to test and foster liquidity for small capitalization companies. For the reasons set forth below, and because the Proposed Plan is inconsistent with the policy behind the Order, we respectfully request that the Commission amend the Proposed Plan.

---

[3] 17 CFR § 242.608.

[4] See speech by Commissioner Michael S. Piwowar, *Advancing and Defending the SEC's Core Mission*, U.S. Chamber of Commerce, Washington, DC (January 27, 2014). Available at: http://www.sec.gov/News/Speech/Detail/Speech/1370540671978#.UuaMVxAo5hE.

### A. Tradebook supports the implementation of Test Groups One and Two.

The Order stated that the quoting and trading increments (and the exceptions thereto) in Test Group Three would be the same as Test Group Two, but Test Group Three would include a trade-at requirement.[5] In the Order, the Commission generally described a trade-at requirement as one that is intended to prevent price matching by a trading center not displaying the National Best Bid and Offer ("NBBO"). The Commission further stated that under a trade-at requirement, a trading center that was not displaying the NBBO at the time it received an incoming marketable order could either: (1) execute the order with significant price improvement ($0.05 or the midpoint between the NBBO); (2) execute the order at the NBBO if the size of the incoming marketable order is of block size; or (3) route intermarket sweep orders to execute against the full displayed size of the protected quotations at the NBBO and then execute the balance of the order at the NBBO price.[6]

As a preliminary matter, Tradebook would like to express its support for Test Groups One and Two, and believes the Commission should move forward with these two test groups. Tradebook commends the Commission's work on these groups and would like to see them implemented without delay.

### B. Test Group Three's trade-at requirement as proposed is deeply flawed, complex, and unworkable.

#### 1. Trade-at's premise is based on "anecdote," an inappropriate catalyst for a market structure overhaul.

Tradebook strongly believes that data-driven thinking will reshape industries and propel companies above rivals. Both regulatory bodies and industry become successful at exploiting data by focusing on business priorities. In fact, big data can only work its magic if a business puts a well-defined strategy in place before it starts collecting and processing information. There is a strong link between financial performance and effective use of big data. Top performing companies process data more rapidly and see the rewards of doing so across functional areas. They also place a higher premium on data than do their peers. In the regulatory context, it is extremely important to have data and empirically based decision-making. Accordingly, Tradebook is very supportive of the Commission's data-driven approach to regulation and, as Chair White articulated, efforts to focus "... the market structure debate as never before on data

---

5 Pilot Securities in Test Group One will be quoted in $0.05 minimum increments but may continue to trade at any price increment that is currently permitted. Pilot Securities in Test Group Two will be subject to the same quoting requirements as Test Group One, and in addition, may only be traded in $0.05 minimum increments. Both test groups are subject to certain exceptions.

6 Notice at 31-32.

and analysis rather than anecdote."[7]

As set forth below, there are numerous issues with the trade-at requirement. However, most importantly, the Order's inclusion of the trade-at requirement in Test Group Three is based on anecdote – someone's subjective belief. "When quoting and trading increments are widened in the absence of a trade-at requirement, the Commission preliminarily ***believes*** there is a possibility trading volume could migrate away from 'lit venues' – trading venues that provide public pre-trade transparency by displaying the best-priced quotations – to 'dark venues' that do not provide such public pre-trade price transparency."[8] This type of conjecture is not a data-driven approach to regulation and stands in stark contrast to Chair White's stated policy that the market structure debate be data-driven and *not* based on anecdote. The Commission should not anticipate an event that may or may not happen. Instead, the Commission should react to it. Testing behavior is one of the purposes of the Tick Pilot.

Further, even if this potential concern were supported by evidence, which neither the Commission nor the Participants have presented, Tradebook does not believe that a trade-at requirement is an appropriate tool for the Tick Pilot to address this potential concern. Instead, the Commission should first: (1) test this preconceived notion to see if it is accurate, whether trading does in fact go to "dark" venues; (2) if so, assess whether it is a result of the structure of Test Groups One and Two (i.e., midpoint trades executing in "dark" venues); and (3) then evaluate to what extent trade-at would actually pull trading out of "dark" venues into "lit" markets or if there are other remedies, such as reducing access fees, that would provide a simpler, less complex solution.

### 2. Even if trade-at were based on evidence, it would not cure the perceived problem.

The Order cites research from Dr. Tuttle stating that, "In 2009, trading volume executed in dark venues was approximately 25 percent. Today, it is approximately 35 percent."[9] Dr. Tuttle's research uses 2012 data. The landscape has shifted somewhat since then but it provides a benchmark from which to make an evaluation. Tradebook's application of Dr. Tuttle's methodology produces what we believe is generally where off-exchange trading is occurring (Figure 1).

---

7 *SEC Launches Market Structure Data and Analysis Website*, Securities and Exchange Commission Press Release, 2013-217 (October 9, 2013). Available at: http://www.sec.gov/News/PressRelease/Detail/PressRelease/1370539865877#.VJCm-la5duY

8 Order at 23.

9 Id.

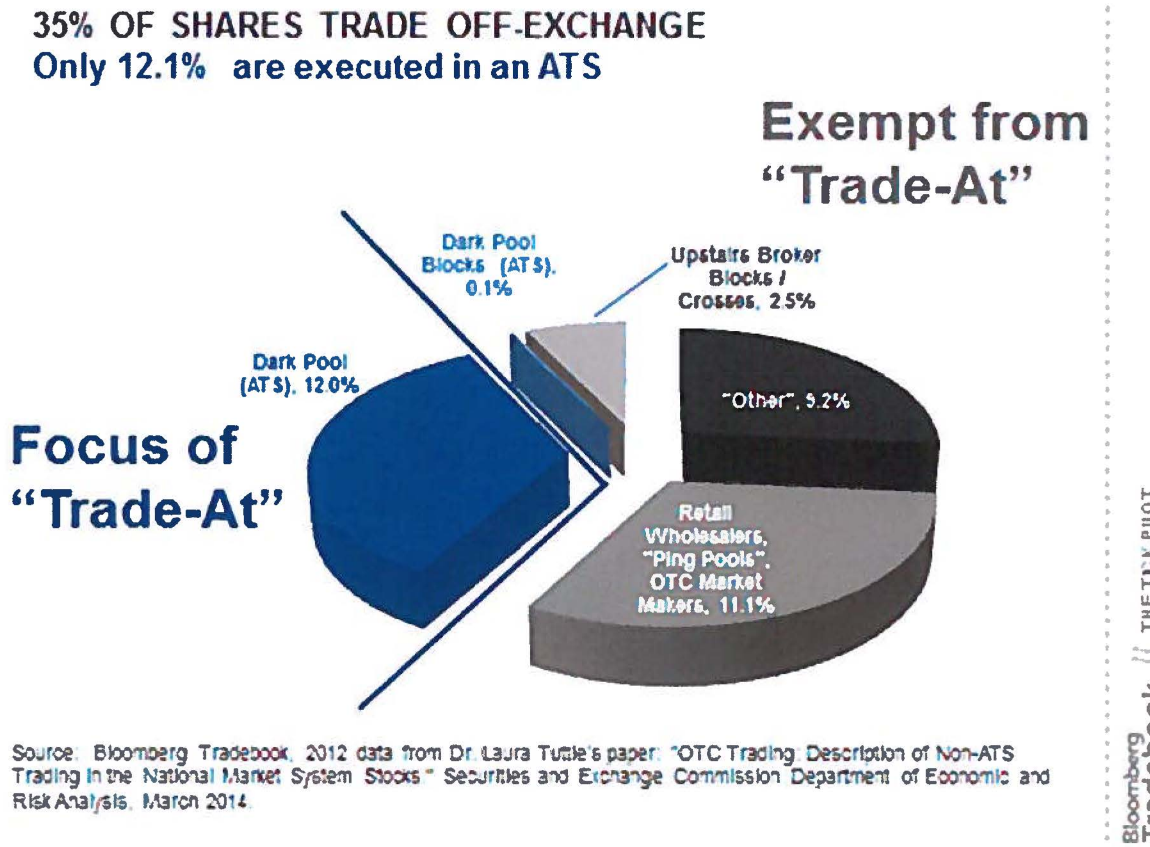


Figure 1

From this chart, the issue with the Participants' Proposed Plan becomes clear – it only addresses a small segment of the Commission's concern in off-exchange trading (because the volume in grey and black is exempt from the trade-at provision), calling into question the basic premise for including the trade-at provision in the pilot.

FINRA in June went live with its plan to increase market transparency by providing data on the activity "in each alternative trading system ("ATS"), including all market facilities commonly called 'dark pools.'"[10] Those who pay the high market data fees to access FINRA's ATS execution information are permitted to gain transparency into the focus of the trade-at pilot (such fees serve as a disincentive to conduct the necessary data analysis). Dr. Tuttle's research shows that we do not have much understanding of the other components that comprise off-exchange trading activity. Nevertheless, some market-based solutions (noted below) are emerging, providing evidence that trade-at should be delayed to let those other initiatives develop.

---

10 *FINRA Makes Dark Pool Data Available Free to the Investing Public*, FINRA News Release (June 2, 2014). Available at: https://www.finra.org/Newsroom/NewsReleases/2014/P519139.

Not only has there been no diagnosis, trade-at is also the wrong treatment to prescribe. To address the level of the off-exchange ATS trading, the Commission should consider exploring other changes within the current market structure before a trade-at restriction. Please see the section on alternatives below. It is critical that we understand whether we are piloting an evolution of market structure rather than a complete change to market structure.

**3. A trade-at restriction is premature; first explore the obvious and simple (free) market solution.**

The data and market behavior suggest that dark trading is based on economic incentives. As Dr. Tuttle's research suggests, there are two components to off-exchange trading: retail internalization/market making and the ATSs or "dark pools." In support of this, the NYSE Group recently announced a plan to waive access fees for midpoint liquidity orders originating from retail investor orders in a bid "enhancing order execution opportunities" to retail investors[11] and to bring more trading back from other off-exchange venues.[12]

To address the fear of liquidity migrating to ATS off-exchange trading, the Commission should first consider piloting adjustments in the access fee rather than implementing a new complex set of rules. With respect to the off-exchange ATS volumes, in Regulation NMS,[13] although the Commission set the access fee cap at 30 cents/100 shares traded there was never any transparency around how the cap level was determined. In the nine years since Regulation NMS, the Commission has never revisited whether this level is appropriate. The Commission should revisit it because the cap is artificially constraining the market. That 2005 rate has served as a pivot for the maker/taker rates since 2005. The world is a much different place than in 2005 when the cap was set. Spreads are tighter and institutional commission rates are lower.

According to the TABB Group, as an execution channel, institutional use of direct market access and algorithms have increased from around 15% in 2005 to 42% in 2013, taking market share away from sales traders and portfolio trading. At the same time, commission rates for the direct

---

11 See NYSE LLC Form 19b-4 filed with the Securities and Exchange Commission on December 12, 2014 (SR-NYSE-70). Available at: http://www1.nyse.com/nysenotices/nyse/rule-filings/pdf.action?file_no=SR-NYSE-2014-70&seqnum=1.

12 Hope, Bradley, *NYSE Group Plans to Slash Costs for Retail Investors*, Wall Street Journal MarketWatch (December 16, 2014). Available at: http://www.marketwatch.com/story/nyse-group-plans-to-slash-costs-for-retail-investors-2014-12-16-111032348?rss=1.

13 Regulation NMS Adopting Release ("Regulation NMS Adopting Release"), Exchange Act Release No. 34-51808 (June 9, 2005), 70 Fed. Reg. 37496 (June 29, 2005). Available at: http://www.sec.gov/rules/final/34-51808.pdf.

market access and algorithm channel has collapsed almost 55% from 1.7 cents per share in 2005 to 0.77 cents per share in 2013. With take fees remaining constant at 30 cents/100 shares, their share, as a percentage of commission, has risen from 18% in 2005 to 39% in 2013. It is clear that there are powerful economic incentives at work for brokers to aggregate liquidity and to internalize flow.

Caught in a prisoner's dilemma to decide pricing strategy to best exploit market power, the exchanges with the highest market shares are reticent to independently lower their take rates, which would independently lower rebates and threaten market share. The Nasdaq OMX Group is planning to unilaterally test the effects of lower trading fees in a select number of stocks to 7 cents/100 shares traded.[14] No other exchange has followed Nasdaq's lead. Why? Perhaps executives at exchanges fear that if they lower their take fees independently, the exchange will have less liquidity with which incoming orders can interact because their maker flow will migrate to the higher rebate venues. It is possible that this is reason why Nasdaq decided to pilot the change on a limited number of stocks. Nasdaq, however, shows that the exchanges should be agnostic to the absolute cap level as long as it preserves their maker-taker spread, their profitability. Nasdaq's pilot will test if unilateral action results in liquidity migration and market share declines. This is a low cost solution, merely a rate change that exchanges do all the time. The market has built in mechanisms that it uses to prepare for this. The Commission should follow Nasdaq's lead and conduct a pilot with lower access fees across the national market structure. This would encourage exchange and industry participation across the board. Without Commission involvement, an individual exchange's proposal with a limited number of securities could serve as a straw man proposal in an exchange effort to show why failure advocates for trade-at.

This leads to our conclusion: a trade-at rule is premature. The Commission created this prisoner's dilemma with the taker fee cap introduced in Regulation NMS in 2005 and the Commission should first pilot lowering the cap to see if that stems off-exchange trading rather than introducing additional complex (trade-at) regulation. The Participants' Proposed Plan's trade-at restriction is complex and is being proposed at a time when the Commission is seeking to simplify the national market structure.[15]

---

14 See Nasdaq Equity Trader Alert #2014-112, Nasdaq Announces the Select Symbols and Amended Pricing (November 17, 2014). Available at: http://www.nasdaqtrader.com/TraderNews.aspx?id=ETA2014-112. See also Nasdaq Equity Trader Alert #2014-102, Nasdaq Institutes a $0.0007 Remove Fee Cap for Select Symbols (November 4, 2014). Available at: http://www.nasdaqtrader.com/TraderNews.aspx?id=ETA2014-102. See also Mamudi, Sam, *Nasdaq OMX to Test Lower U.S. Stock Exchange Trading Fees*, Bloomberg News (November 4, 2014). Available at: http://www.bloomberg.com/news/2014-11-04/nasdaq-omx-to-test-lower-u-s-stock-exchange-trading-fees.html.

15 Chair Mary Jo White, *Enhancing Our Equity Market Structure*, Sandler O'Neill & Partners, L.P. Global Exchange and Brokerage Conference, New York, N.Y. (June 5, 2014). Available at:

### 4. Protecting inside depth with trade-at compromises best execution.

There are significant differences between the trade-at requirement as contemplated by the Commission's Order and the Participants' Proposed Plan. The Order seeks to "prevent price matching by a trading center not displaying at the NBBO" while the Participants' version requires orders to "trade-at all display first before any Reserve or hidden orders." This difference has far reaching consequences in terms of market complexity and best execution. Quite simply, the Order incentivized display and elevates the treatment of Reserve while the Participants' version takes Rule 611 to the absolute extreme by protecting more than just the inside depth – something that Regulation NMS explicitly chose not to do. In Regulation NMS, the Commission was quite clear that it did not want to protect the depth – it would be too complicated and also have implications for best execution. "[The Commission] believes that the Market BBO Alternative: (1) strikes an appropriate balance between competition among markets and competition among orders; and (2) will be less difficult and costly to implement than the Voluntary Depth Alternative."[16] The Participants' Proposed Plan does not show why the Commission should change its reasoning or any value in protecting the inside depth of market.

To the contrary, protecting the inside depth compromises best execution. Let's assume that we have complete transparency into the market as exhibited by Figure 2:

| Price | Center | Display | Reserve |
|---|---|---|---|
| 10.00 | ARCX | 500 | 500 |
| 10.00 | NYSE | 500 | 100 |
| 10.00 | NSDQ | 200 | 5,000 |
| 10.00 | BYXX | 500 | |

Figure 2

An incoming order directed at Nasdaq (NSDQ) for 5,000 shares: prior to the trade-at rule, Nasdaq would execute the entire order, executing at display and Reserve at $10.00. Why would an order be directed to Nasdaq for 5,000 shares when only 200 are displayed? Many broker order routers, such as Tradebook's are optimized – using statistical heat maps – to determine anticipated "available" liquidity. Or perhaps the customer wants to lift the market and post the residual unexecuted balance on Nasdaq because it is the most active venue in the stock. There are many reasons consistent with best execution obligations for this to type of order to be sent.

---

http://www.sec.gov/News/Speech/Detail/Speech/1370542004312#.VJOleAJ04.

16 Regulation NMS Adopting Release at 24.

Under the Order, Nasdaq would continue to execute the entire order, display and Reserve because the Commission sought to incentivize display under its trade-at rule. The Participants' version however, dramatically changes the concept of trade-at making it much more complex. For example, in order for Nasdaq to execute display and Reserve simultaneously, the sender of an order will have to utilize a mutation of the existing intermarket sweep order that requires additional and more complex obligations – the "Trade-At Intermarket Sweep Order"[17] – introducing even more order type complexity into the national market system. For instance, one unintended consequence is the additional resources that will need to be poured into developing new smart order routers that understand different rules based on ticker. Consistent with this notion, Tradebook requests that the Commission be vigilant (and enforce the Exchange Act and Commission rules) to ensure that the exchanges' file the necessary rule change filings for this new and complex enhanced order type definition that will almost certainly be needed to fulfill the exchanges' complicated version of trade-at (if approved). Unfortunately, this is exactly the opposite of what Chair White has requested and what the exchanges' have publicly committed to with respect to order types.

One of the reasons the Commission did not protect the market depth in Rule 611 of Regulation NMS was because the Commission wanted to protect the principle that:

> "... the duty of best execution requires broker-dealers to periodically assess the quality of competing markets to assure that order flow is directed to the markets providing the most beneficial terms for their customer orders. Broker-dealers must examine their procedures for seeking to obtain best execution in light of market and technology changes and modify those practices if necessary to enable their customers to obtain the best reasonably available prices. In doing so, broker-dealers must take into account price improvement opportunities, and whether different markets may be more suitable for different types of orders or particular securities."[18]

The Participant's version of trade-at runs contrary to this stated principle in Regulation NMS.

Tradebook's Quantitative Research group used client executions to answer the following question: "What is the impact of an order 10 seconds after its execution?" If prices move away from the execution price significantly, there would be positive market impact. If prices move incrementally away from the price after our executions, there conversely must exist a negative impact (adverse selection). Either type of impact is undesirable; really what we are looking for (in the law of large numbers) is little to no impact – neither positive nor negative. The

[17] Proposed Plan at 18, Example 1.

[18] Regulation NMS Adopting Release at 160-161.

Quantitative Research group found that as a venue's market share declines, its impact increases.[19] The Participants' Proposed Plan appears to force broker-dealers to trade with venues that are not "beneficial" to their orders. In the above example, let's assume that the broker sends to Nasdaq the 5,000-share order (order 1). Nasdaq executes 3,500 shares at $10.00. Nasdaq routes 1,500 away (30% of the order) even though it had the liquidity to execute the order in full. Let's assume that another order (order 2) comes to Nasdaq for 1,500 shares. Does Nasdaq execute the 1,500 shares in order 2 because it knows it already sent order 1 in to comply with trade-at? Or does it execute 200 shares (because of the redisplay from Reserve) and then send 1,300 shares to treat each order independently? How does Nasdaq decide where to route the balance of the order – how does it choose? This is a very complex situation to resolve. It has potential for conflicts of interest (*i.e.*, whether Nasdaq is favoring one exchange over another). Does Nasdaq have best execution obligations? How does Nasdaq disclose how its order router works and will Nasdaq have to provide metrics for its members and the investing public to understand (prove) what it is doing? This is why the Commission never intended to protect the depth, and certainly why Commission staff sought to avoid complexity by advising in the subsequent Regulation NMS Frequently Asked Questions that display and Reserve should be linked in execution.

Let's assume that in order 1 Nasdaq misses the liquidity at the other venues and the market moves to a $10.05 offer (since the Tick Pilot moves the quote in nickel increments). The customer executes the balance at $10.05 raising the average price from what should have been $10.00 to $10.015.

For larger orders, especially in these less liquid stocks, brokers will want to find and extract liquidity without moving the entire market. The heat maps are used to engage a few venues that may have a tendency to have Reserve orders rather than increasing signaling risk by engaging the entire display market at the same time. The Commission's version of trade-at in the Order rightfully preserved this strategy for best execution.

### 5. Reserve, locked markets and trade-at – Day ISO causes market DISOrder.

Tradebook recently commented on NYSE's Day ISO (intermarket sweep order with a day time-in-force condition) order type proposal.[20] Through its comment letters, Tradebook expressed to

---

19 See Bloomberg Tradebook's blog, The 'Book, *Toxicity: It's Not Just Reserved for Dark Pools*, by Jingle Liu, Darren Marabello, Kapil Phadnis and Gary Stone (November 22, 2013). Available at: http://www.bloombergtradebook.com/blog/toxicity-its-not-reserved-just-for-the-dark-pools/.

20 See letters from Raymond M. Tierney III, President and Chief Executive Officer, and Gary Stone, Chief Strategy Officer, Bloomberg Tradebook LLC, to Brent J. Fields, Secretary, U.S. Securities and Exchange Commission, dated September 22, 2014 and October 6, 2014. Available at: http://www.sec.gov/comments/sr-nyse-2014-32/nyse201432-2.pdf and http://www.sec.gov/comments/sr-nyse-2014-32/nyse201432-4.pdf. Tradebook

the Commission that the Day ISO order type causes systematic violations of Regulation NMS Rule 610(d) locked and crossed markets and explained that the Commission should elevate the treatment of Reserve. The entire reason for commenting on this order type was because Tradebook was looking ahead to the Tick Pilot. Tradebook respectfully requests that the Commission re-evaluate this order type in light of the Tick Pilot.

Through its letters, Tradebook signaled that NYSE's intended use of the order type would cause market disorder, and particularly now in light of the Tick Pilot, this order type will have serious market consequences. For example, when a Day ISO order locks the market, how is trade-at handled? Yes, the Participant's plan does provide an exemption – suspending trade-at – when the market is crossed. But it stands to reason that the market would only cross because of the issues the Day ISO raises. As for locked markets, it appears that a broker and the exchanges would be expected to route to both the bid and offer in a Day ISO or unclear Reserve-replenishment induced locked market. Routing to both the bid and the offer is a technological challenge. This is a serious unintended consequence of the Tick Pilot. The Day ISO causes disorder and a level of market complexity that is wholly undesirable and unnecessary.

Let's assume the market looks like Figure 3:

| Ask Price | Center | Display | Reserve |
|---|---|---|---|
| 10.00 | ARCA | 100 | 300 |
| 10.00 | NSDQ | 100 | 500 |
| 10.00 | BATS | 100 | 200 |
| 10.05 | NYSE | 200 | 1,000 |

Figure 3

NYSE receives a Day ISO ALO (add liquidity only) order at $10.00. The member sends a "trade-at ISO order" to buy 200 shares, 100 at BATS and 100 at NSDQ. Tradebook continues to assert that posting orders and compliance with Rule 610(d) is solely a self-regulatory organization ("SRO") responsibility. Only SROs can display quotes, and therefore, only SROs can assure compliance with the rule. This is the perfect opportunity for the Commission, through the NMS plan with the SROs for the Tick Pilot, to emphasize that (only the) SROs control the posting of displayed orders in this context.

believes that NYSE's original Rule 13, governing orders and modifiers, was correct in permitting ISOs to be immediate-or-cancel, which should be the ISO standard.

Thus, it is inappropriate for a member to ship and post, which is what the Day ISO order type does. There may be a difference between what a market will look like when a member ***sends*** an order and when the market center ***receives*** the order that causes an SRO to systematically lock the market if they accept the Day ISO. This is caused by Reserve replenishment process.

As stated in our Day ISO comment letters, the Commission should promote Reserve because it incentivizes display and adds more stabilizing depth to the market. However, as we noted, Reserve replenishment is handled differently at each exchange. Some exchanges will yield – check the quote prior to re-displaying out of Reserve – and others automatically redisplay. The Commission should clarify this discrepancy and make it clear that Reserve should have priority in the market – again incentivizing display.

So the problem is as follows (Figure 4 below): When the member ***sends*** the Day ISO to NYSE it is also ***sending*** 100 shares to NSDQ, ARCA and BATS. Our understanding of the market behavior is, ARCA (NYSE's sister exchange) and BATS will automatically redisplay at 10.00, locking the market without checking that NYSE went 10.00 bid. NSDQ, on the other hand, does check the market prior to redisplay and will slide the Reserve redisplay to 10.05, yielding to the Day ISO so it does not violate Rule 610(d) and lock the market.

This real-world situation is perverse. Reserve orders should have standing and the rest of the market, especially a Day ISO, should yield to their redisplay. This is in keeping with the principle of the Commission's Order to promote display in the markets.

From a regulatory perspective, the ***receiving*** market center cannot abrogate its responsibility to not lock the market. And, in this example, by not checking the quote prior to posting on a Day ISO, NYSE will systematically lock the market if ARCA or BATS are contras to the Day ISO side of the order.

| Center | Display | Bid Price | | Ask Price | Display | Center |
|---|---|---|---|---|---|---|
| NYSE | 100 | 10.00 | | 10.00 | 100 | ARCA |
| | | | | 10.00 | 100 | BATS |
| | | | | 10.05 | 100 | NSDQ |

Figure 4

**6. The Commission should elevate the treatment of Reserve.**

At its inception in 1996, Tradebook introduced the concept of "Reserve" to the U.S. equity markets.[21] Reserve is display in waiting. The Commission once again has the opportunity to clarify and raise the profile of the Reserve order. Under the Tick Pilot, Tradebook believes the Commission should elevate Reserve with the following measures: (1) Reserve should automatically replenish at its display price; (2) SROs should check the market prior to posting, thus yielding to Reserve; and (3) Exchanges should, because of Reserve's link to the display, give it matching priority over any other hidden order.

Additionally, if the Commission is going to pilot a trade-at requirement (again, we believe that other options should be explored first), then incoming orders should be able to execute all the way through the display and Reserve. Tradebook does not support trading with all display before trading with Reserve and the Commission in Regulation NMS rejected protecting the entire market depth for the same reason. Reserve is one of the fundamental ways to promote display, greater size in the market, and stability.

### 7. Trade-at as proposed has the potential to cause the Tick Pilot to fail.

Tradebook has heard many industry representatives voice strong concerns that the Participants' version of trade-at requirement is so costly, complex, and overly burdensome that they cannot justify the expense to do the necessary work in order to trade these securities – especially given that the Tick Pilot is only one year and this test group only covers 400 low liquidity securities. Brokers might take a wait-and-see approach and use the exchanges' trade-at order routers when taking liquidity.

In fact, some of the exchange participants are similarly voicing strong concerns regarding a trade-at restriction. On December 19, 2014, Financial News reported that ***BATS publicly disagreed*** with ICE/NYSE's recent stock market proposal addressed to Chair White, which is publicly reported by several news sources to contain a trade-at provision. This is particularly significant given that BATS controls four of the participant exchanges that submitted the Proposed Plan for the Tick Pilot.

> "Bats, based in Lenexa, Kansas, favors a 'tiered' approach to exchange fees, charging less for highly traded stocks and more for less-liquid stocks, [Joe Ratterman, CEO of

---

[21] Foley, Kevin of Bloomberg Tradebook LLC, Statement to the Senate, Committee on Banking, Housing, and Urban Affairs, Subcommittee on Securities. *Trading Places: Markets for Investors,* Hearing (March 22, 2000). Available at: http://www.banking.senate.gov/00_03hrg/032200/foley.htm.

BATS] said. The exchange operator ***is completely opposed to a 'trade-at' rule***, which would force more trading onto exchanges, he said." (emphasis added)[22]

It also was reported that Mr. Ratterman called the plan "highly problematic" and said that it would "hurt" investors by increasing costs and reducing options for trading. "The big problem is they are proposing a one-size-fits-all approach, but it could have a perverse effect across the market," he said.[23]

If industry (and even some participant exchanges) do not support this portion of the Tick Pilot, it will fail. This will not only hurt investors, but also hurt issuers of small capitalization securities, the very entities this pilot was intended to benefit. In addition, the purpose of the Tick Pilot is to assist the Commission, market participants, and the public in studying and assessing the impact of increment conventions on the liquidity and trading of stocks of small capitalization companies. Thus, Tradebook has significant concerns that trade-at may harm the liquidity of these companies, and at the same time, such non-participation will provide extremely limited measurable data to assess. This is of concern because the Proposed Plan's trade-at requirement will not improve trading and liquidity of small capitalization securities and will not benefit investors. The trade-at restriction will prove to be extremely difficult and costly for industry, investors, and issuers. Instead, the Tick Pilot should be about simplicity and fostering industry participation.

**8. The Commission should mandate transparency in the exchanges' Smart Order Routers (SOR).**

There appears to be a strong likelihood that members will rely on exchanges for trade-at compliance. According to BATS exchange's own order type usage data, only 29% of its aggressive orders use the ISO designation.[24] When looking at executed volume, BATS, ARCA[25] and NYSE[26] publish statistics and 35-42% of executed volume does not use the ISO designation. This is significant because investors must be able to evaluate effectiveness of the exchanges'

---

22 Hope, Bradley, *BATS opposes NYSE owner's stock-market reform plan*, Financial News (December 19, 2014). Available at: http://www.efinancialnews.com/story/2014-12-19/bats-opposes-nyse-owners-stock-market-reform-plan?mod=home-news.

23 Id.

24 See *BATS: U.S. Stock Exchanges: Order Type Usage Summary* (December 2014): http://www.batstrading.com/market_data/order_types/.

25 See *NYSE Arca - Order Type Usage (Percentage of Matched Volume)* (2014). Available at: https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Order_Type_Usage.pdf.

26 See *NYSE - Order Type Usage (Percentage of Matched Volume)* (2014). Available at: https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Order_Type_Usage.pdf.

SORs. Of course, trading in the pilot securities and Tick Pilot will be a much smaller subset of this, but these numbers are still indicative. Not all market participants have ISO capabilities, which might result in the decision to simply route these orders to the exchanges. Others may decide not to do the implementation work for only 400 lower liquidity securities in Test Group Three and rely on the exchanges.

Trade-at has implications for the buy-side because of the requirement to trade with all display – this increases signaling risk and potential market impact. In addition, with trade-at, there is significant risk for the buy-side because the buy-side is not a member of the exchanges and cannot ask for SOR transparency information. Tradebook is a firm supporter of transparency driving trust.[27] Tradebook believes the buy-side should be empowered via a Commission SOR transparency initiative within the context of the Tick Pilot. The exchanges should be asked to publish specified information regarding their SORs. This transparency may also serve as an incentive for members to do improve their own SORs to be able to participate in the Tick Pilot.

### C. Less invasive alternatives to trade-at are available and more suitable.

For the foregoing reasons, Tradebook urges the Commission to eliminate the trade-at portion of the Tick Pilot. A trade-at requirement is not the appropriate regulatory tool for the Tick Pilot to address the potential concern that possible trading volume could migrate to "dark" venues. There are other tools that the Commission should evaluate that would remedy these perceived concerns and achieve the same goals.

#### 1. The Commission should pilot a reduced access fee initiative.

Rather than forcing the market to implement the Participants' version of the trade-at restriction, the Commission should evaluate whether alternative ideas are available. In particular, the Commission could first take the incremental step of piloting reduced access fees before surging ahead with trade-at, particularly the Participants' version. As an alternative, Tradebook has advocated to reduce the access fee cap to 7 mils, which would make this a de minimis rebate.[28] This should be tested first. There is nothing in the Order, the Proposed Plan, or the Notice that addresses the contention that off-exchange trading is rising because the exchanges are too expensive. Likewise, the Commission and Participants never seek to assess whether payment for order flow is distortive. In fact, with respect to cutting access fees, the market's built in

---

27 See letter from Raymond M. Tierney III, President and Chief Executive Officer, and Gary Stone, Chief Strategy Officer, Bloomberg Tradebook LLC, to U.S. Securities and Exchange Commission, regarding the Commission's Concept Release on Equity Market Structure, dated June 28, 2013. Available at: http://www.bloombergtradebook.com/content/uploads/sites/2/2013/07/SEC-comment-letter-on-trade-trans.pdf.

28 Please see Tradebook's blog, The 'Book, which contains a link to the Tradebook's Tick Pilot webinar. Available at: http://www.bloombergtradebook.com/blog/sec-listening-tick-size-pilot/.

mechanisms are already prepared for dealing with changes in price. Tradebook believes a reduced access fee initiative would be a less costly alternative, which the Commission can evaluate after six months and then decide at that point whether some version of trade-at is completely necessary.

### 2. The Commission could empower issuers to decide.

The Commission could consult with its foreign counterparts and exchanges regarding issuer decisions regarding their stocks. In certain European markets, if there is an issue with liquidity on certain stocks, the listed company may sign a contract with the market maker, and set spreads by contract. If the company believes a certain spread is appropriate, it will execute the contract. The company can seek to improve liquidity via its contracts.[29] According to a researcher who has examined such contracts, "The evidence is fairly consistent across markets and over time – market quality improves for the firms, the gains in market quality are greater than simply those contracted for, and the listed firms see increases in value."[30]

### 3. As a last resort, implement the version of trade-at that was requested by the Commission.

Tradebook does not believe the trade-at requirement should be part of the Tick Pilot. However, if the Commission nonetheless decides to move forward with a trade-at requirement, Tradebook respectfully requests that the version of trade-at that is utilized should be closer to what was requested by the Commission's Order. Tradebook believes the Order contemplated a more workable plan than the one the Participants have proposed.

In addition, for the reasons set forth above, the most predominant other tool that the Commission should utilize to achieve the goal of the pilot securities trading on "lit" venues is to elevate the treatment of Reserve.

## D. The proposed data must be publicly available.

In the Notice, the Commission requested comment on the public availability of the data. It is absolutely critical that the data be widely available, especially for academics. The Tick Pilot has gone beyond a pilot on nickel spreads; it has become a pilot on liquidity formation and has the potential to provide a rich data set and superior understanding of liquidity in the future.

---

[29] For a leading paper on this issue, please see *Paying for Market Quality* by Amber Anand, Carsten Tanggaard, and Daniel G. Weaver as published in the Journal of Financial and Quantitative Analysis Vol. 44, No. 6, Dec. 2009, pp. 1427-1457 (2009), Michael G. Foster School of Business, University of Washington, Seattle, WA 98195.

[30] Amber Anand, personal communication, December 10, 2014.

1. **The Commission and academics should also do independent assessments.**

Tradebook agrees that the Participants should do assessments of the data. In addition to the Participants, the Commission itself (Trading and Markets in conjunction with the Division of Economic and Risk Analysis) should conduct an independent assessment. The Commission is most familiar with the metrics, why staff selected those metrics, what the Commission did to prepare for the Tick Pilot, etc. The Commission is in the best position to benchmark the starting point, and expectations for and actual changes.

Academics will do an independent assessment and offer a different viewpoint. It is important to keep in mind that once the Tick Pilot is complete, even assuming industry participation and success of the program, the results from the data will not be clear cut to determine success or failure. For example, people will view market quality in varying respects because it is difficult to quantify. Academic studies focusing on different dimensions of market quality will greatly assist with these assessments. Providing the data publicly will also significantly broaden the base of researchers examining issues associated with the tick pilot, beyond the constrained resources of economists at regulators and exchanges.

2. **The Commission should add additional metrics.**

Tradebook is a strong proponent of data-driven regulation. Accordingly, Tradebook proposes to add the following metrics:

a. **Order type usage statistics.** This will provide insight into Test Group Three. NYSE, ARCA and BATS are the only exchanges that release order type usage statistics. This information is critical to determining whether members did the work to participate. The usage of ISO or trade-at ISO for these securities will indicate that members are participating in Test Group Three. If not, market participants are letting the exchanges route for compliance.

b. **Off-exchange trading information.** Assess where the off-exchange trading is emanating from. This will enable the Commission to better understand liquidity migration. For example, if there is an increase in off-exchange, is it because of an increase in retail participation (which was exempted from trade-at compliance)?

c. **Research coverage metric.** Tradebook recommends evaluating research coverage as a metric. For example, to evaluate whether research coverage increases with nickel spreads. Please see the following section for a more fulsome discussion of this topic.

## E. Research is a crucial part of the liquidity "eco-system": The Participants' Proposed Plan needs research metrics.

The premise of the tick pilot is to evaluate if increasing spreads enhances market quality. The Commission noted in the order that one component of the liquidity formation "eco-system" is "investor interest" which can be generated by sell-side research. As the Commission noted, "In particular, a few studies have raised questions regarding whether decimalization has reduced incentives for underwriters to pursue public offerings of smaller companies, limited the production of sell-side research for small and middle capitalization companies, and made it less attractive to become a market maker in the shares of smaller companies"[31] and, "In the view of the Small Company Advisory Committee, the economic incentives provided by wider minimum tick sizes would encourage market making and research analyst coverage, and thereby enhance the attractiveness of the IPO market for small companies and their ability to raise capital."[32]

In the Order, one of the Commission's propositions was to see if wider spreads would make market making more profitable, and whether this in turn would drive more research. In fact, the Commission proposed a metric for market maker profitability for this very purpose. The reasoning is that if there is just a transfer of money to market makers without a social benefit of increased liquidity (which we presume the Commission will measure by volume – is volume liquidity?) and research, why do it. Thus, we thought it fitting to add a research metric.

By way of example, the Bloomberg Professional® Service offered by Bloomberg Financial L.P. has two data sets that the Commission may wish to consider as "research" benchmarks.

Analyst Recommendations (ANR<GO>) provides transparency on the performance of analyst recommendations (Buy/Sell/Hold) for a selected equity. ANR provides a list of analysts' recommendations, price targets, price target time periods, and total return rankings, as well as consensus rating for the equity. Of course, ANR tracks the total number of analysts that are in the sample set to create derived indexes. ANR provides a broad measure of "research coverage" because it monitors not only fundamental analysts that cover a stock with models and estimates at a broker or similar independent research firm, but also smaller groups of analysts that use algorithms (to cover thousands of companies with one analyst) and generate just a buy/hold/sell recommendation(s).

Best Consensus (EEB<GO>) displays aggregated broker-contributed projections (*e.g.* earnings per share ("EPS")) for a stock. Whereas ANR is a broad measure of "coverage," analysts that

---

31 Order at 6.

32 Order at 10.

calculate EPS estimates find this as a way to approximate the "street coverage" of a stock.

KCG's[33] research used the three-test methodology in the order to assemble a list of stocks that would be eligible for the Tick Pilot if it started in July 2014.[34] KCG's research not only determined the potential universe, but also segregated the potential stocks into liquidity "buckets": Extremely Illiquid, Very Illiquid, Low Liquidity and Moderately Liquid. Tradebook segregated the count of ANR contributing analysts and the count of EEB contributing analysts into three buckets: "Research is an Issue," "Base Case: Minimum amount of needed coverage," and "Good to Plentiful." The methodology: Research was deemed an issue if there were less than 3 analysts covering a stock; this was derived off the Base Case where having at least three to six analysts covering a stock was deemed as provided some potential for diversity of opinion; and more than 7 analysts covering the stock was a potential rich field of opinion.

We crossed referenced the ANR (Figure 5) and EEB (Figure 6) analyst counts with the liquidity segments. The results were similar: Research is an issue for the stocks that are in the Extremely Illiquid and Very Illiquid buckets. A large percentage of stocks with Low Liquidity still have issues with research coverage that project performance and the moderately liquid stocks have good coverage.

| Analysts Providing ANR<GO> Buy/Sell/Hold Recommendations | Total | Extremely Illiquid | Very Illiquid | Low Liquidity | Moderately Liquid |
|---|---|---|---|---|---|
| Research is an Issue Stocks with <4 analysts) | 38% | 95% | 60% | 14% | 0% |
| Base Case: Minimum amount of needed coverage (4 to 6 analysts) | 26% | 3% | 30% | 28% | 0% |
| Good to Plentiful (7+ analysts) | 37% | 2% | 10% | 58% | 100% |

Figure 5: Analysts Providing ANR<GO> Buy/Sell/Hold Recommendations

[33] KCG was formed by the merger of Knight Capital Group, Inc. and GETCO.

[34] See Mackintosh, Phil, KCG. *Market Microstructure: Who Gets the Short End of the 'Tick?* (July 2014) Available at: https://www.kcg.com/uploads/documents/KCG_Tick_Size_Analysis_Final.pdf. See also Mackintosh, Phil, KCG. *Market Microstructure: Today's Spreads Make More Sense Than Nickels* (August 2014). Available at: https://www.kcg.com/uploads/documents/Todays_Spreads_Make_More_Sense_Than_Nickels.pdf.

| Analysts Providing EEB<GO> Estimates | Total | Extremely Illiquid | Very Illiquid | Low Liquidity | Moderately Liquid |
|---|---|---|---|---|---|
| **Research is an Issue** Stocks with <4 analysts) | 58% | 98% | 79% | 39% | 0% |
| **Base Case:** Minimum amount of needed coverage (4 to 6 analysts) | 19% | 0% | 17% | 25% | 20% |
| **Good to Plentiful** (7+ analysts) | 23% | 2% | 4% | 37% | 80% |

Figure 6: Analysts Providing EEB<GO> Estimates

The Commission may want to consider monitoring research coverage for shifts in the pilot securities to determine if the wider spreads result in more stocks receiving coverage and if there is movement in those stocks receiving more robust coverage (migrating from "Research is an Issue" and the "Base Case" to the "Good to Plentiful" segments).

**F. The Commission should not delegate its responsibilities to address key issues to the Participants in the form of FAQs.**

The Proposed Plan raises more questions than it answers. The Commission must allow for meaningful notice and comment by the public and, more importantly, for Commission review. The significant deviation of the Order from the Participant's Proposed Plan and Chair White's initiative for the Commission to review exchange order types shows that the SROs may have different agendas than the Commission. In the case of trade-at, the exchanges are seeking "trade-on" rather then trade-at display. It is important that the Commission assert its jurisdiction and address all of the key policy issues raised by the Tick Pilot.

It is Tradebook's understanding that the Participants are currently working on, and will release, a set of Frequently Asked Questions (FAQs). While we appreciate these efforts to interpret the meaning of the Proposed Plan, particularly given its complexity and lack of clarity, Tradebook believes the public should have the opportunity to review and comment on the FAQs prior to implementation. The information in the FAQs will prove to be material to the Tick Pilot itself and warrants an opportunity for meaningful public comment. In addition, Commission review and oversight in the formulation of the FAQs, which are certain to have material policy implications, is warranted.

### 1. The Commission must address the gaps in the Participants' Proposed Plan.

In addition to not delegating key issues and responsibilities to the participant exchanges, the Commission must address the gaps in the Order and the Proposed Plan. For example, the Commission should consider clarifying not only trade-at compliance benchmarks for matching and Regulation NMS Rule 611 routing, but for the national market. In the Order, the Commission specified that benchmark should be the NBBO, which is defined under Regulation NMS Rule 600 as the market that is generated from the network processors, commonly known as the Security Information Process ("SIP"). For consistency with what the market believes is compliance with Regulation NMS Rule 611, the Participants' Proposed Plan expanded the benchmark to be the NBBO (SIP) or the protected best bid and offer ("PBBO") approach as outlined in Regulation NMS where, assuming that the participant had reasonable policies and procedures, it could use direct feeds for compliance.[35]

Furthermore, because the trade-at rule now brings routing front and center into the exchanges' services, the Commission has the opportunity to clarify whether the approach taken, NBBO or PBBO should be consistent across the platform. Tradebook always assumed that the feeds coming into the matching engine and order router, though separate functions, had to use the same feed – NBBO or PBBO. Apparently some platforms may use the SIP (NBBO) for matching and the PBBO to route ISOs.

### 2. The SEC should engage in formal rulemaking and not defer to the participant exchanges on major policy decisions.

As noted throughout this comment letter and the Notice, there are deep tensions between the Order and the Proposed Plan. As a general matter, Tradebook would have preferred to see a formal rulemaking in this space rather than leaving the Tick Pilot to the interpretation of the Participants under an NMS plan. At the same time, however, Tradebook understands that many reasons why an NMS plan was the best approach for the Commission. Accordingly, Tradebook has two requests: (1) The Commission should engage in the rigorous cost-benefit analysis it would ordinarily conduct under a formal rulemaking. Tradebook applauds recent public statements indicating this to be the case. (2) That the Commission not defer to the Participants on major policy decisions, particularly those surrounding their interpretation of the trade-at restriction.

---

35 See Securities and Exchange Commission, Division of Trading and Markets, *Responses to Frequently Asked Questions Concerning Rule 611 and 610 of Regulation NMS* (April 4, 2008). Available at: http://www.sec.gov/divisions/marketreg/nmsfaq610-11.htm.

Congress, when enacting Section 11A of the Exchange Act,[36] did not envision that the SROs would be for-profit exchanges devising NMS plans that maximize exchange profits. In utilizing an NMS plan approach, it is imperative that the Commission not abrogate its role to oversee the SROs, and that it follow the Exchange Act and Congressional intent, and precedent Regulation NMS authority. The Commission should conduct its own review of the Proposed Plan and amend it accordingly. Also, in connection with one of the lessons learned from Regulation NMS, the Commission should mandate an implementation phase to understand how the Tick Pilot practically works.

3. **The participant exchanges should be subjected to heightened regulatory scrutiny for Tick Pilot implementation.**

The participant exchanges often try to publicly represent themselves as a mere utility operating in a benevolent manner for the greater good.[37] However, one look at this aggressive form of trade-at financially benefitting the participant exchanges dispels this fallacy.

Given that the conflict of interest presented by the Participant exchanges with trade-at and the fact that the Proposed Plan's version is highly complex and deeply flawed, Tradebook believes it is critical that the Commission subject the Participant exchanges to heightened regulatory scrutiny in assessing the proper workings of the Tick Pilot. The Proposed Plan fails to mention how compliance will be monitored and what kind of market surveillance and testing will be done to ensure the sound operation of the Tick Pilot. Also unclear is the role of FINRA. Will the Commission oversee the entire process? What role will FINRA play? This should not be left to the individual exchanges to self-regulate, especially given the operation of trade-at as proposed (forcing an order to interact with all display on every market). This issue must be addressed prior to implementation, because if this is not done correctly, it will be impossible to rely on the data.

---

36 Section 11A(a)(3)(B) authorizes the Commission, in furtherance of its statutory directive to facilitate the establishment of a national market system, by rule or order, "to authorize or require self-regulatory organizations to act jointly with respect to matters as to which they share authority under [the Act] in planning, developing, operating, or regulating a national market system (or a subsystem thereof) or one or more facilities thereof." 15 U.S.C. 78k-1(a)(3)(B).

37 For example, in the context of equities versus derivatives, see Stafford, Phillip, *ICE urges caution on European derivatives reform*, Financial Times (December 16, 2014). "One thing the market fails to understand between equities and derivatives is that the NYSE never invents or creates a product," Jeff Sprecher, chief executive told FT Trading Room. "We don't make the decision about where companies want to list their shares. ***We run a utility business.*** It's very different from listed derivatives where the exchanges decide to list the products. The real solution is to leave it to exchanges to decide what to allow to be netted with others. Right now there's tremendous competition for listed products." (emphasis added)

## Conclusion

Some of the issues presented in this letter impact Tradebook and some do not, but all of these issues advance the core goals of an effective and functioning market structure and national market system with respect to the pilot securities.

For the foregoing reasons, Tradebook respectfully requests that the Commission amend the Proposed Plan because such amendment is critical to the successful operation of the Tick Pilot and its potential impact on the liquidity of small capitalization stocks. Amendment is necessary and appropriate in the public interest, for the protection of investors, to facilitate capital formation, and in furtherance of the purposes of the Exchange Act.

*    *    *

If you have any questions or you would like to discuss these matters further, please do not hesitate to contact us.

Raymond M. Tierney III
President and Chief Executive Officer
Bloomberg Tradebook LLC

Gary Stone
Chief Strategy Officer
Bloomberg Tradebook LLC