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Unpacking the SEC's Final Rule about Modernizing Market Infrastructure

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In March 2020, the SEC proposed groundbreaking changes that would affect RegNMS, including the content of consolidated market data, the "SIP" (Securities Information Processor), and introducing competition to provide that data (currently only one SIP provider for each tape is allowed, creating a regulated monopoly). The proposal was highly controversial, but our overall analysis was that while it would hurt wholesalers (market makers for retail brokers), single-dealer platforms and exchanges, investors and public companies would benefit tremendously from the proposed updates to this rule.

During the public comment period for the proposed changes, BestEx Research's CEO Hitesh Mittal provided his comments to the SEC[1]. In addition, he appeared on IEX's Boxes + Lines podcast[2] with Ronan Ryan and John Ramsay to discuss his thoughts and wrote an article for Markets Media[3] conveying that the proposal would be great for investors overall but needed some adjustments to be most effective.

On Dec 9, 2020, the SEC published the final version[4] of their groundbreaking rule for modernizing market infrastructure, widely known as NMS2.0. The new rule contains significant modifications to the original proposal[5].

At BestEx Research, we are pleased to see that the SEC agreed with two key recommendations made in our comment letter on the proposed rule. We were also pleasantly surprised to see that our letter was extensively referenced in the SEC's final rule and that our comments contributed to its formulation.

The NBBO will largely by unaffected but odd lots will be included in the SIP feed

In its documentation, the SEC shared that one major motivation behind this rule is to reduce the information asymmetry between the subscribers of high-priced proprietary feeds available from exchanges and the market data available via SIP feeds. Exchanges currently only contribute their Best Bid and Best Offer (BBO) to the SIPs. But the BBO provided to the SIP is not the actual best bid or best offer at the exchange, rather it is the Best Bid or Best Offer comprised of orders sized

[1] BestEx Research's original comment letter to the SEC on the proposed changes to RegNMS can be viewed here.
[2] Hitesh Mittal appeared on Episode 15 of IEX's Boxes + Lines Podcast.
[3] The Markets Media article can be read here.
[4] The final version of the rule can be read here.
[5] The original proposal of these changes can be read here.

at 100 shares or more[6]. Bids priced better than the “best” bid are not conveyed to the SIP if they are odd lots.

For higher-priced stocks this creates a major challenge. As stock splits have become a rarity and stocks popular with retail investors have become increasingly expensive, a lot of trading in these securities happens in odd lots. The economic value of 50 shares of a $100 stock, after all is the same as the economic value of 100 shares of a $50 stock. But excluding odd lot information from SIP feeds for these higher-priced stocks eliminates a great deal of price discovery information for investors and widens perceived spreads in these stocks somewhat artificially.

As a result, we believe the SEC did not go far enough with regards to odd lots in their original proposal. The SEC proposed that instead of adding all odd lots to the SIP feed, the rule would redefine the round lot size for higher-priced securities. For example, the round lot size of stocks priced between $50 and $100 would become 20 shares instead of 100 shares. This proposal would have made liquidity from 20 to 100 shares available via the SIP feed but not for those odd-lot orders sized below 20 shares.

This plan, however, created a side effect that the SEC seemed hesitant to accept completely. The SIP publishes a single National Best Bid and Offer (NBBO) representing the best bid and best offer across all exchanges. By design, then, the NBBO does not include odd lots. But reducing the round lot size for higher-priced stocks would narrow the spread defined by the NBBO. And the narrowing of the NBBO would have two indirect effects other than providing more information to SIP consumers. First, because the NBBO is used to determine the “best execution” obligation by retail and institutional brokers, a fundamental change to the meaning of the NBBO would create new obstacles in measurement of and communication around best execution. Second, because NBBO prices are also “protected” by the RegNMS Order Protection Rule (OPR) which prevents market makers and broker-dealers from executing at prices outside the NBBO, narrowed spreads would also narrow profit margins for wholesalers and single-dealers and, in turn, reduce their payment for order flow (PFOF) to brokers who supply marketable order flow.

OPR is a controversial rule within the industry and within the SEC itself. The SEC was not willing to expand the scope of OPR indirectly as a result of the proposed change to round lot sizes of higher-priced securities. So the SEC originally proposed that the protected best bid and offer price (PBBO) would continue to be determined using the round lot of 100 shares, while the NBBO would be determined via the modified round lot definitions for the purpose of fulfilling brokers’ best execution requirements.

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[6] However, if odd lots inside the NBBO add up to a round lot, the aggregated quantity—priced at the least aggressive of the prices—is published via the SIP feed as the best bid or offer for an exchange. For example, if NASDAQ has an order to buy 50 shares at $10.25, an order to buy 60 shares at $10.23, and another order to buy 200 shares at $10.21, the best bid published by NASDAQ to the SIP feed is $10.23 for 100 shares (not $10.21 for 200 shares). Odd lots that aggregate up to less than a round lot and are priced better than the NBBO are currently not available via SIP feeds. Since 2013, however, all trades—including odd lots—are disseminated via SIP.

While it seemed like SEC's intention was to make more data available via the SIP (and perhaps create a stricter best execution obligation for brokers), the SEC was trying to ensure that they did not expand the scope of the controversial OPR. While we welcomed the SEC's desire to make more liquidity visible via the SIP, we strongly opposed the separation of the NBBO from the PBBO. In our comment letter, we wrote,

> "We believe that the proposed separation of the NBBO and the PBBO will introduce complexity and confusion, increase the cost of implementation of this proposal drastically, and negate the other positive effects this proposal would create by right-sizing round lots. Hence, we recommend that the Commission consider applying the new round lot definition to both the NBBO and the PBBO."

And in his interview with IEX podcast, our CEO said,

> "Today you have the same NBBO and PBBO…[but the SEC's proposal is] separating the NBBO and PBBO and I think that's going to create a lot of chaos and confusion in the marketplace…a lot of systems have been implemented in a way that they can only use one NBBO…so it may negate the positive effect [of] right-sizing the round lot definition…Our advice would be to use [the] more economically rational approach [of updating round lot size] for the NBBO and apply it to PBBO and just keep it simple."

In the final version of the rule, changes have been made to address the issue of odd lots more effectively. The SEC has done away with the notion of PBBO and NBBO in the final rule (which we are happy to see) and takes a milder approach to changing round lot sizes. Only the securities priced above $250 will face the change in the round lot size. In the Russell 3000 index, representing the top 3000 stocks by market capitalization, only 116 securities are priced above $250[7]. So while the NBBO will narrow for some stocks, there are only a small number of securities impacted by this change. For those stocks that it does impact, the new rule will uniformly impact brokers' best execution obligation and the obligation not to trade outside the now narrower NBBO.

In addition, the rule mandates that exchanges must publish ***all*** odd lot prices to the SIP as long as they are better than the NBBO. This is a groundbreaking change, with an even broader impact than the original proposal. The final version of the rule references our comment letter (among others) in the discussion leading to this conclusion, citing that

> "[BestEx Research] stated that if the new round lot definitions were protected then trading venues and broker-dealers will be able to rely on existing technology to continue to operate without significant changes to current execution and routing logic compared to having to build new logic and workflow to account for a separate NBBO and PBBO."

Via these updates, the SEC has achieved its goal of making more data available without affecting the controversial Order Protection Rule significantly and keeping it simple without the increased complexity of separating the NBBO and PBBO. Lack of information asymmetry between SIP consumers and the proprietary market data feed consumers will likely lead to better price discovery and improve liquidity in the marketplace.

Yet it remains to be seen whether the screens of EMSs, OMSs, market data terminals, and retail brokers will start displaying the odd lot prices inside the NBBO. It also remains to be seen whether Transaction Cost Analysis vendors will use odd lots priced inside the NBBO instead of

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[7] See the table in the SEC's press release announcing the SEC's final version of the rule.

just the NBBO to provide best execution analysis to buy-side institutions. Most of these vendors historically use SIP feeds which will now have this additional information available to them and they may decide to start using it. If that occurs, it will increase visibility around the true "best" prices and in turn may create pressure on wholesalers and single-dealer platforms to provide liquidity at inside NBBO prices, thus reducing the payment for order flow brokers receive. Ultimately, we believe that more transparency should lead to better prices for all investors, but how long that will take is difficult to predict.

Competing SIP Consolidators Will Have Increased Flexibility

The SEC's original proposal also included a mandate for exchanges to provide depth-of-book data (for up to 5 levels below the NBBO) and auction imbalance information to SIPs, which remains in the final rule and further reduces information asymmetry.

The other groundbreaking change the SEC proposed that remains in the new rule is to allow multiple vendors to compete with current SIPs—monopolies by design, with a conflict of interest against their own proprietary data feeds. In the original proposal, the SEC proposed that all such vendors will be required to provide all of this information to their clients.

In our comment letter, we welcomed the SEC's proposal for allowing more competition because

> "[Current] SIP operators have little incentive to provide better content at more competitive prices with lower latency because it may cannibalize their own direct feed business".

But we added,

> "We believe that SIP providers should not be required to include [the additional] information in their products."

The Commission agreed with our criticism and modified the original proposal to mandate that exchanges provide the information but allow competing SIP vendors to provide information to their clients based on client demand. The Commission referenced our comments regarding this important adjustment that will make it more affordable for vendors to offer this data and create more competition than the original proposal would have allowed. The final ruling, in reference to our comment letter, said:

> "The Commission agrees with the comments that objected to requiring that all competing consolidators sell a product containing all of the specified elements of consolidated market because forcing higher fixed costs and a mandatory product offering across all competing consolidators potentially would make it more difficult for competing consolidators to enter the market and to tailor their services and product offerings while recouping expenses."

Investors Win

Congratulations to the SEC for putting together a final rule that addresses core issues in our market structure. This will likely be the legacy of Brett Redfearn, the Director of the SEC's Division of Trading and Markets. Hiring industry practitioners like Mr. Redfearn and Dmitry Bulkin who understand the practical implications of the planned changes has surely contributed to creating regulations that will help investors a great deal. The changes may be less popular with established players such as large exchanges, wholesalers, and large banks, but will likely benefit all others—especially investors—in the long run.