

Regulatory Notice

19-12

Trade Reporting and Compliance Engine (TRACE)

FINRA Requests Comment on a Proposed Pilot Program to Study Recommended Changes to Corporate Bond Block Trade Dissemination

Comment Period Expires: June 11, 2019

Summary

FINRA requests comment on a proposed pilot program to study changes to corporate bond block trade dissemination based on recommendations of the Securities and Exchange Commission's (SEC) Fixed Income Market Structure Advisory Committee (FIMSAAC or Committee). Specifically, the proposed pilot is designed to study two primary changes recommended by the FIMSAAC: an increase to the current dissemination caps for corporate bond trades, and delayed dissemination of any information about trades above the proposed dissemination caps for 48 hours. The proposed pilot incorporates these primary elements of the FIMSAAC Recommendation and other features, including a control group, designed to support a meaningful analysis of the pilot's impact.

Questions concerning this *Notice* should be directed to:

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- ▶ Alex Ellenberg, Associate General Counsel, Office of General Counsel (OGC), at (202) 728-8152 or alexander.ellenberg@finra.org.

Action Requested

FINRA encourages all interested parties to comment on the proposal. Comments must be received by June 11, 2019.

Comments must be submitted through one of the following methods:

- ▶ Emailing comments to pubcom@finra.org; or
- ▶ Mailing comments in hard copy to:

April 12, 2019

Notice Type

- ▶ Request for Comment

Suggested Routing

- ▶ Compliance
- ▶ Fixed Income
- ▶ Legal
- ▶ Operations
- ▶ Research
- ▶ Systems
- ▶ Trading
- ▶ Training

Key Topics

- ▶ ETFs
- ▶ Fixed Income
- ▶ TRACE
- ▶ TRACE-Eligible Security
- ▶ TRACE Transaction Data
- ▶ Trade Reporting

Referenced Rules & Notices

- ▶ Notice to Member 06-01
- ▶ Notice to Members 03-73
- ▶ Notice to Member 03-12
- ▶ Notice to Members 01-18
- ▶ Regulatory Notice 17-23
- ▶ Regulatory Notice 13-35
- ▶ Rule 6710
- ▶ Rule 6730
- ▶ Rule 6750
- ▶ SEC Rule 144A

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To help FINRA process comments more efficiently, persons should use only one method to comment on the proposal.

Important Notes: The only comments that FINRA will consider are those submitted pursuant to the methods described above. All comments received in response to this *Notice* will be made available to the public on the FINRA website. Generally, FINRA will post comments as they are received.¹

Before becoming effective, the proposed rule change must be filed with the SEC pursuant to Section 19(b) of the Securities Exchange Act (SEA).²

Background and Discussion

FINRA's Trade Reporting and Compliance Engine (TRACE) provides information to investors and other market participants about secondary market trades in corporate bonds and other debt securities. Currently, TRACE disseminates information to the marketplace about corporate bond trades, including trade price and size, immediately upon receipt. FINRA launched TRACE in 2002 following an SEC staff review of the U.S. debt markets and a corresponding call for FINRA "to develop systems to receive and redistribute [corporate bond] transaction prices on an immediate basis."³ As FINRA noted at the time, it had worked closely with the SEC, the dealer community and other market participants "to ensure that TRACE maximizes transparency, while optimizing liquidity."⁴

To promote transparency without negatively impacting liquidity, FINRA adopted a measured, phased approach to corporate bond trade dissemination that began in 2002 with the most actively traded and liquid bonds.⁵ In 2003, FINRA phased in dissemination for transactions in smaller investment grade (IG) issues,⁶ and in 2005 FINRA expanded dissemination for non-investment grade (non-IG) corporate bonds, with delayed dissemination for certain non-IG trades.⁷ Beginning in 2006, all over-the-counter (OTC) secondary market trades in corporate bonds were disseminated immediately upon receipt, except for trades executed pursuant to SEC Rule 144A.⁸ FINRA began immediate dissemination for trades in corporate bonds executed pursuant to SEC Rule 144A in 2014.⁹

FINRA also leverages academic study to evaluate the impact of TRACE in support of its mission. FINRA performs and publishes economic analysis of TRACE impacts¹⁰ and it provides substantial support for independent research.¹¹ Academic research generally has found that liquidity conditions proxied by aggregate activity have improved or have not deteriorated with the introduction of TRACE transparency. However, some market participants have raised concerns about difficulty executing block-size trades in recent years, and some have pointed to metrics or questions they feel are not fully addressed in the academic research, including turnover (aggregate trading activity as a fraction of total bonds outstanding) and the concept of unexecuted trades.

The FIMSAC was empaneled by the SEC in 2017 “to provide the Commission with diverse perspectives on the structure and operations of the U.S. fixed income markets, as well as advice and recommendations on matters related to fixed income market structure.”¹² In particular, the FIMSAC has been asked to help the Commission ensure that regulation of the fixed income markets is designed “to meet the needs of retail investors, as well as companies and state and local governments.”¹³

The state of bond market liquidity was the first issue taken up by the FIMSAC. Discussion at the first FIMSAC meeting cited a number of factors that may be impacting current liquidity conditions and the ability to execute block trades, including technology-driven changes to fixed income market structure and the regulation of bank capital.¹⁴ The FIMSAC discussion also identified the perceived dealer cost of TRACE’s immediate post-trade transparency as an area to study further. Following on this discussion, at the second FIMSAC meeting the Committee introduced a recommendation for a pilot to study specific changes to FINRA’s current post-trade transparency protocols for block-size trades in corporate bonds.¹⁵ The FIMSAC Recommendation includes two primary elements: an increase to the current trade size dissemination caps for large corporate bond trades, and a 48-hour dissemination delay for trades above the caps. While a majority of the FIMSAC ultimately approved the Recommendation, several members questioned aspects of the recommended pilot and raised concerns, which are discussed in more detail below.

The proposed pilot described in this *Notice*, developed in consultation with SEC staff, incorporates the two primary elements of the FIMSAC Recommendation. It also includes elements designed to produce pilot data that can be measured against a baseline, so that the pilot’s effect can be assessed in relation to FINRA’s core regulatory objectives of market integrity and investor protection.

Below, this *Notice* discusses:

- ▶ the current protocols for TRACE dissemination of corporate bond trades;
- ▶ research concerning the impact of TRACE dissemination;
- ▶ the FIMSAC Recommendation for a pilot;
- ▶ comments on the FIMSAC Recommendation;
- ▶ a description of FINRA’s proposed pilot;
- ▶ an analysis of the pilot’s expected economic impacts; and
- ▶ questions for comment on FINRA’s pilot proposal.

As noted throughout, FINRA encourages comment on all aspects of a potential pilot, including the need for a pilot, the potential impact of a pilot, the proposed pilot design, the economic impact assessment and possible alternatives to a pilot.

Current TRACE Dissemination Protocols

Today, all OTC secondary market trades in TRACE-eligible¹⁶ corporate bonds must be reported to FINRA as soon as practicable, but no later than within 15 minutes of the time of execution.¹⁷ FINRA then publicly disseminates information about these trades immediately upon receipt.¹⁸

FINRA currently applies dissemination caps to large-size trades in corporate bonds—*i.e.*, trades that exceed \$5 million for IG corporate bonds, and \$1 million for non-IG corporate bonds.¹⁹ For trades at or below the caps, FINRA disseminates the security identifier, whether the trade was between dealers, or between a dealer and a customer or affiliate, whether the FINRA member involved in the trade bought or sold the security, and the price and full size of the trade. For trades above the dissemination caps, FINRA disseminates all of the same information, but with the size of the trade capped as “5MM+” (for IG) and “1MM+” (for non-IG). The full, uncapped size of trades above the caps is later published as part of an historical dataset six months after the calendar quarter in which they are reported.²⁰

Research Concerning the Impact of TRACE Dissemination

Most of the empirical literature on corporate fixed income trading occurred after transaction prices became publicly available through TRACE beginning in 2002. The initial studies of transparency in the corporate bond market are summarized below. These studies used complementary methods and generally reached similar conclusions: that improved post-trade transparency is associated with lower transaction costs and price dispersion and not associated with greater trading volume for actively traded, recently issued and IG bonds.

Goldstein, Hotchkiss and Sirri (2007) studied a set of BBB-rated bonds, phased into price dissemination in April 2003. In coordination with FINRA, the release of data was structured as a randomized experiment with a control group. They created a stratified sample of bonds to be disseminated along with controls of non-disseminated bonds. They reported that transaction costs on newly transparent bonds declined relative to bonds that experienced no transparency change, except for very large trades. They also reported that transaction costs declined as trade sizes increased, and did not demonstrate further decline on average for sizes above 1,000 bonds. One measure of transaction costs that FINRA’s proposed pilot will use is the dealer round-trip measure that is defined in Goldstein, Hotchkiss and Sirri (2007).

Edwards, Harris and Piwowar (2007) also studied the impact of transparency on transactions costs. The authors employed a design that compared the experience of a set of bonds for which trades were disseminated through TRACE to another set that had not yet been made transparent. By comparing the two sets of bonds before and after the introduction of public dissemination, they were able to isolate the impacts of transparency directly. This type of analysis is referred to as a “difference-in-difference” methodology in the academic literature. Looking at data for the period between January 2003 and January

2005, they found that dissemination was associated with lower trading costs for corporate bonds with larger issue size, better credit quality, more recently issued bonds and bonds closer to maturity. The empirical methodology for this proposed pilot is informed by Edwards, Harris and Piwowar (2007), as it examines the impact of a dissemination delay by comparing trading behavior before versus after its implementation, and uses the same measure of transaction costs. Another closely related paper by Bessembinder, Maxwell and Venkataraman (2006) used insurance company transaction data before July 2002 to find that improved information in disseminated bonds improved market quality for non-disseminated bonds. This study also showed a reduction in institutional trading costs around the initiation of TRACE reporting in July 2002.

In more recent papers, academics have studied a variety of questions that are related to transparency using TRACE corporate bond data. Harris (2015) found that the lack of a consolidated quote system in bond markets limits the ability of retail and smaller institutional investors to observe best available prices. A consequence of this opacity is that brokers may arrange trades at prices inferior to those readily available. Bao, O'Hara and Zhou (2018) and Bessembinder, Jacobsen, Maxwell and Venkataraman (2018) found empirical evidence that the Volcker Rule reduced the willingness of dealers to commit capital to market making. Financial institutions also attribute some of their decline in capital commitment to fixed income trading to the greater capital costs associated with higher bank capital requirements. This decline is attributable to bank-affiliated dealers, as non-bank dealers have increased their capital commitment. Schultz (2017) and Choi and Huh (2017) found that there has been a greater move to riskless principal trading away from trading that would be intermediated by dealers relying on dealer inventory. Jacobsen and Venkataraman (2018) examined the impact of post-trade reporting of Rule 144A corporate bond transactions. They found that TRACE dissemination had no measureable impact on turnover or dealers' participation in interdealer trades, facilitation of block transactions or willingness to hold inventory. Small dealers increased market share and reduced the cost advantage of large dealers.

Dick-Nielsen and Rossi (2016) found that hedge funds and buy-side traders fill the void created by reduced bank involvement in market making, and concluded that this change is associated with less immediacy and demands greater customer patience. In addition, another study finds that mutual funds are an important source of liquidity supply when other investors sell bonds (Wang, Zhang and Zhang 2018). Furthermore, Anand, Jotikasthira and Venkataraman (2018) found that some bond mutual funds exhibit a persistent trading style that provides liquidity by absorbing dealer inventory positions. Cici, Gibson and Merrick (2011) focused on the dispersion of month-end valuations placed on identical bonds by different mutual funds when calculating net asset value (NAV). They found that this bond price dispersion declined over their sample period, and may be related to improved transparency in the corporate bond market from TRACE.

FIMSAC Recommendation for Block Pilot

At the second FIMSAC meeting on April 9, 2018, the FIMSAC's Transparency Subcommittee introduced a Preliminary Recommendation for a Pilot Program to Study the Market Implications of Changing the Reporting Regime for Block-Size Trades in Corporate Bonds. At the same meeting, the FIMSAC modified and approved the Recommendation by a vote of 15 to four.²¹

The FIMSAC Recommendation includes two primary elements. First, it would increase the current dissemination caps from \$5 million to \$10 million for IG corporate bonds, and from \$1 million to \$5 million for non-IG corporate bonds.²² This would result in the dissemination of additional size information for trades between the current and proposed caps. Second, the Recommendation would delay dissemination of any information about trades above the proposed \$10 and \$5 million caps for at least 48 hours.²³ This would result in no price or size transparency for these trades during the dissemination delay period. After 48 hours, the trade price and capped size of the trade would be disseminated and the full size of the capped trade would be published three months after the calendar quarter in which the capped trade was reported to FINRA, rather than the current six-month delay.

The following example illustrates where the Recommendation would decrease price transparency. Today, for an IG trade with a size of \$11 million par value, FINRA disseminates immediately upon receipt the price of the trade, and a capped trade size (\$5MM+). Under the Recommendation, for the same trade, no information about the trade would be disseminated for 48 hours. After 48 hours, the trade's time of execution, the price of the trade and a capped trade size (\$10MM+) would be disseminated. A second example illustrates where the Recommendation would increase size transparency, with no change to price transparency. Today, for an IG trade with a size of \$6 million par value, FINRA disseminates immediately upon receipt the price of the trade, and a capped trade size (\$5MM+). Under the Recommendation, for the same trade, FINRA would disseminate immediately upon receipt the price of the trade and the full, uncapped trade size.

The FIMSAC included data tables in its Recommendation that help estimate the impact of the recommended changes. Between 2013 and 2017, there was an average of 350 trades per day above the proposed \$10 million cap for IG corporate bonds. These are the trades in IG corporate bonds for which no information would be disseminated for at least 48 hours (different from today, where there is immediate dissemination of price and other trade information but with the size capped). As noted in the FIMSAC Recommendation, these trades represented 1.2% of the total number of trades and 32.6% of total par value traded. Similarly, there was an average of 545 daily trades in non-IG corporate bonds above the proposed \$5 million cap that would be subject to the dissemination delay and withheld for 48 hours. These trades represented 3.2% of the total number of trades and 40.8% of total par value traded.

For pilot design, the FIMSAC Recommendation proposed that the new dissemination protocols apply to all trades in TRACE-eligible corporate bonds for a period of one year, subject to an early termination mechanism linked to market quality indicators. The FIMSAC Recommendation did not contemplate a control group. It also identified a list of proposed measurement criteria that contemplate the evaluation of, in relation to the current dissemination protocols, average daily trading volume of capped and uncapped trades, the number of capped and uncapped trades, the proportion of volume in block trades, the price impact of block trades, transaction cost analysis, and changes in dealer capital, inventory and behavior.

The FIMSAC Recommendation did not include written supporting rationale. During discussion at the April 9th meeting, the Recommendation was framed as exploring the balance between transparency, which was said to promote efficient markets through lower search costs and greater price competition, and too much transparency, which was said could impair liquidity and market quality in certain market segments if it increases risk in the provision of capital or the likelihood of market impact.²⁴ As explained by the chair of the Transparency Subcommittee, the Recommendation was based on a “general consensus ... within the [Transparency Subcommittee] and also through outreach to other market participants that maybe the corporate bond market – restraints in the corporate bond market, especially for larger blocks, wasn’t working as it should and was perhaps being hindered by some of the TRACE reporting requirements.”²⁵

Proponents of the Recommendation stated at the meeting that that a dissemination delay could help encourage dealers to provide more block liquidity. One panelist at the meeting stated that dealers “have a very asymmetric risk profile when [they] bid or offer a block of securities to a client,” and he offered data to show declining trade size between 2007 and 2017.²⁶ The same panelist further noted that a two-day dissemination delay would allow his firm to recycle 50% of block trade risk, while today it recycles 30% of block trade risk on T+0 (the date of the block trade). Proponents also discussed the ways they believed the Recommendation would benefit institutional investors, the people those institutions represent and individual investors.²⁷

Others, however, raised questions during the meeting about the Recommendation. One member of the FIMSAC and the Transparency Subcommittee strongly urged the inclusion of a control group in the study design.²⁸ Another FIMSAC member asked whether the Recommendation’s increase in size transparency was a sufficient balance against the complete reduction in transparency for block-size trades during the dissemination delay.²⁹ Other points of discussion included the impact of reduced price transparency on investors,³⁰ and potential pilot gaming or manipulation by dealers.³¹

Comments on FIMSA Recommendation

Nine comments have been submitted to date on the FIMSA Recommendation.³² Four commenters expressed support for the Recommendation, while five opposed it. Commenters generally addressed the need for the block pilot advanced by the FIMSA Recommendation, the potential impact of the pilot and pilot design.

Comments on the Need for the Pilot

Commenters that supported the FIMSA Recommendation generally felt the pilot was needed based on their view of market conditions for block-size trades in corporate bonds. SIFMA stated that “block size transactions have become substantially more difficult to execute and counterparties are more frequently choosing to break up blocks into smaller transactions or delay transactions to avoid market frictions.” SIFMA’s statement is based on the observation of its members that there has been a “decline in the proportion of block trades to total volume during a period associated with an increase in the average and median size of corporate bond new issues.”³³

JPMorgan Chase also commented that “[p]roviders of liquidity accept heightened risk when transacting in block trades, and these trades are immediately disclosed to the market with masked trade sizes.” According to JPMorgan Chase, “as a result of this immediate disclosure, broker dealers now prefer smaller trade sizes on average, particularly for less liquid and lower rated bonds” and adjust their pricing to reflect the cost of immediate post-trade transparency.³⁴ Similarly, Eaton Vance stated that “[f]inding block trade size liquidity in the market is often difficult,” and that “[t]he quick publication of all post-trade prices is a significant cause of this difficulty.”³⁵ Eaton Vance explained that immediate TRACE dissemination of trades reduces dealers’ incentives to provide block-size liquidity because immediate post-trade transparency “lowers transaction costs for market participants, but imposes costs on the Market Makers who give up valuable information on trade details without having received any pre-trade benefit.”

In contrast, three FIMSA members jointly submitted a comment letter that disagreed with the Recommendation and questioned the FIMSA’s justification for the pilot. In the Harris Letter, these FIMSA members took issue with the argument that immediate trade dissemination—in place currently—imposes material additional costs on dealers that need to be addressed.³⁶ According to the Harris Letter, despite dealer concerns about being “front run” after printing large trades, it is not likely that other traders will sell ahead of the block dealer either because they would not want to sell a bond they’ve chosen to own, or because it is expensive to sell bonds short. The Harris Letter further stated that, “in comparison to equity markets, the price moves associated with fundamental information in the bond markets—especially for IG bonds—are small so that the profits associated with front running are not likely large.” To the extent dealers encounter significant price impact when engaging in block trades, the Harris Letter contended that dealers “can reduce that impact by selling slowly,” and that market structure should not “favor large traders to the detriment of smaller traders.”

The Harris Letter also pointed to alternative explanations—besides TRACE post-trade transparency—to explain changes to large dealer inventory and capital commitment.³⁷ Specifically, the Harris Letter cited as primary factors the growth of electronic trading and competition with traditional dealers from new liquidity-providing proprietary trading firms, and post-financial crisis bank regulation that has affected the willingness or ability of bank-affiliated dealers to commit capital. In addition, the Harris Letter noted as secondary factors a decrease in bond volatility because of low interest rates and substantial economic growth.

Comments on the Potential Impact of the Pilot

JPMorgan Chase supported the FIMSAC Recommendation on the grounds that “the recommended pilot would provide a data-driven approach to consider regulatory changes and calibrate a well-tailored transparency regime.”³⁸ According to JPMorgan Chase, “[t]ransparency is important to the price discovery process, but the risk of mis-calibration is significant, with the potential to undermine the overall functioning of the market.” SIFMA similarly stated that “[t]he pilot recalibration recommended by the SEC FIMSAC offers an opportunity to better balance both transparency and liquidity objectives to promote health and robust markets.”³⁹ Eaton Vance supported the Recommendation because it believes the pilot “will encourage market participants to target larger trade sizes in order to take advantage of the forty-eight hour dissemination delay,” and “produce more liquidity in block size trades” as a result.⁴⁰

On the other hand, several commenters expressed concern about the potential impacts of the pilot. The Harris Letter observed that “[s]ubstantial empirical evidence has shown that public dissemination of TRACE trade reports has saved public investors about \$1B/year.”⁴¹ The Harris Letter contended that, by reducing price transparency during the 48-hour dissemination delay, “[t]he proposed change will transfer power and thus wealth from receiving investors, who are typically smaller investors, to dealers and the large block initiating traders.”⁴² The Harris Letter further stated that that such a transfer “is inefficient as dealers undoubtedly would capture some or even much of the benefit of knowing the block trade prices,” and it questioned the value of the Recommendation’s proposal to increase size transparency by raising dissemination caps. In addition, the Harris Letter expressed concern that delayed dissemination of block-size trades could mislead the market about supply and demand conditions, with particular impacts on smaller dealers. The Harris Letter offered the following example: “if a dealer crosses \$20 million in bonds from one seller to four buyers each buying \$5 million on a riskless-principal basis, under the recommended proposal, FINRA would delay dissemination of the \$20 million dealer buy report but would immediately disseminate reports [for] each of the \$5M dealer sales. The immediately disseminated reports would give the appearance of surplus buying demand and the possibility that one or more dealers have been left short facilitating this customer demand.”⁴³

Similarly, The Credit Roundtable, an organization of institutional fixed income managers, objected to the Recommendation's proposed 48-hour dissemination delay, which it believed would create information asymmetry that would ultimately benefit "broker/dealers, very large institutional investors, and high frequency leveraged players at the expense of other participants in the corporate bond market."⁴⁴ Vanguard also objected to the significant reduction in price transparency that would be caused by a 48-hour dissemination delay. Vanguard expressed concern that imposing a dissemination delay on a third of recorded market volume "could have a meaningful negative impact on daily price discovery and execution costs while advantaging a segment of market participants over others."⁴⁵ Vanguard further observed that "[b]y bifurcating the market into those with access to information and those without, [the FIMSAAC Recommendation] may even create additional barriers to entry for newer or smaller market participants, and further entrench those with the largest market positions."⁴⁶

Separately, two Exchange Traded Fund (ETF) market makers expressed concerns that the Recommendation would diminish price transparency in the corporate bond markets and degrade the market for overlying ETFs and other related derivatives. Jane Street stated that a 48-hour dissemination delay "would introduce a material amount of information asymmetry and adverse selection to the corporate bond market."⁴⁷ As a result, Jane Street noted it would need to adjust its behavior when trading with a block liquidity provider because of the risk the block liquidity provider has information about large block trades it executed that have not yet been disseminated to the market. Specifically, Jane Street stated it would be forced to widen its quotes for corporate bond ETFs, and "that wider spreads in ETFs would impose significant costs on ETF end-users, who are in substantial part retail investors."⁴⁸ Flow Traders offered similar observations about ETF spreads and also pointed to other derivative products, like total return swaps, credit default swaps and the credit default swap index, that would become more difficult to price because of the information asymmetry that would be created by the Recommendation.⁴⁹ Vanguard also stated that diminished price transparency would create pricing challenges for market makers who create and redeem ETFs, which would translate into higher costs for ETF investors.⁵⁰

Comments on Pilot Design

Several commenters provided specific feedback on particular elements of the FIMSAAC's recommended pilot design. JPMorgan Chase suggested that the non-IG dissemination cap should be raised to \$3 million, as originally proposed in the FIMSAAC Preliminary Recommendation, instead of \$5 million, as proposed in the final FIMSAAC Recommendation.⁵¹ With respect to the FIMSAAC Recommendation's proposed measurement criteria for the pilot, JPMorgan Chase stated that the objective criteria concerning trading activity should be measured separately for bonds with large and small outstanding values to compare impact across issue sizes. JPMorgan Chase further suggested that, to the extent price impact or transaction cost analysis are studied, the calculation methodology should be better defined. And JPMorgan Chase questioned whether the proposed measurement criteria concerning changes in dealer capital and inventory, or changes in dealer behavior, should be included at all, because they could be influenced by other factors outside the pilot and therefore misleading.

The Harris Letter proposed to change the pilot design altogether. The Harris Letter recommended a decrease in the dissemination caps, from \$5 million to \$2.5 million for IG, and from \$1 million to \$750,000 for non-IG.⁵² The Harris Letter stated that the decrease “would protect the dealers by further hiding the full sizes of the blocks that they have purchased and must distribute,” but “the receiving investors would still know the actual trade prices.” To offset its proposed decrease in size transparency, the Harris Letter recommended publishing the full size of IG trades between \$1 and \$10 million, and non-IG trades between \$750,000 and \$2.5 million, two market days after they occur, and publishing the full size of larger IG and non-IG trades four market days after they occur.

Vanguard expressed concern that if the FIMSAC Recommendation were to proceed without a control group, the study would result in “data that is open to misinterpretation.” Vanguard specifically noted that volume alone is not an appropriate measure of success in fixed income markets and urged more comprehensive data study before the implementation of a pilot. In addition, Vanguard stated that the proposed thresholds for delayed dissemination in the FIMSAC Recommendation—*i.e.*, the proposed increased dissemination caps of \$10 million for IG corporate bonds and \$5 million for non-IG corporate bonds—are “far too low” and “could lead to gaming and data distortions that would impair the credibility of the results.”⁵³

Description of FINRA’s Proposed Pilot

FINRA is soliciting comment on a proposed modified pilot design based on careful study of the FIMSAC Recommendation and associated comment letters, and after consultation with SEC staff. FINRA’s modifications are intended to allow for a more meaningful study of the pilot’s impacts on market integrity and investor protection, including large investors who trade in block sizes, smaller investors who do not, and investors in derivative or other related markets.

Proposed Pilot Design

As discussed in this *Notice*, the FIMSAC Recommendation essentially combines two different proposed changes to the current transparency framework. First, it proposes to increase the number of trade reports that would report the full size of the transaction, which effectively increases size transparency for those trades. And second, it proposes a complete dissemination delay for trade reports above the new dissemination cap size, which effectively reduces price (and other information) transparency for those trades. Because the FIMSAC Recommendation includes elements designed both to increase and decrease transparency for different size trades, FINRA’s primary challenge is to design a pilot that can reasonably assess the impact of the different changes proposed, and the trade-off between them, without imposing unnecessary costs and disruptions to markets and market participants.

The proposed pilot would last for a duration of one year. As the FIMSAC recommended, and based on consultation with SEC staff, the pilot would be subject to early termination if market quality indicators demonstrate a significant disruption. The pilot would include non-convertible, callable and non-callable TRACE-eligible corporate debt securities, except for bonds issued by religious organizations or for religious purposes (e.g., church bonds), and equity-linked notes. New issues would be included in the pilot the first day after they begin trading in the secondary market. There would be three pilot study groups and one control group. The three test groups are:

- ▶ **Test Group 1**, which would study a 48-hour dissemination delay with no change to the current dissemination caps. In other words, for bonds in this test group, TRACE would apply a 48-hour dissemination delay to trades above \$5 million in IG corporate bonds, and trades above \$1 million in non-IG corporate bonds.
- ▶ **Test Group 2**, which would study increased dissemination caps with no change to the current dissemination timeframes. In other words, for bonds in this test group, TRACE would increase dissemination caps to \$10 million for IG corporate bond trades and \$5 million for non-IG corporate bonds trades, without applying a 48-hour dissemination delay.
- ▶ **Test Group 3**, which would study both a 48-hour dissemination delay and increased dissemination caps. In other words, for bonds in this test group, TRACE would apply a 48-hour dissemination delay to trades above \$10 million in IG corporate bonds, and trades above \$5 million in non-IG corporate bonds.

Similar to the SEC's approach to test and control group creation for its recently adopted Transaction Fee Pilot, FINRA proposes to implement stratified sampling for this pilot in a manner that permits comparison between each test group and the control group.⁵⁴ Pilot bonds would be stratified along the characteristics of bond issue size, age of bond issue, bond rating and 144A status.

FINRA would use these variables to create categories, or buckets, of bonds. Bonds in each of the buckets will be randomly assigned before the start of the pilot to the four pilot groups (three test and one control), with Test Groups 1, 2 and 3 each containing one-third of the bonds randomized to the control group.

These stratification variables are proposed because they have been identified as capturing differences in liquidity among corporate bonds (Bessembinder, Jacobsen, Maxwell and Venkataraman 2018). For example, investors may trade larger offerings more than smaller ones simply because they are more liquid at the issuance date due to their size. Alternatively, larger offerings are usually issued by large issuers. Large issuers, in turn, may have better informational environments, thereby reducing the cost of acquiring information about the issuer. This may make the bonds more liquid. Similarly, younger bonds could be more liquid than older ones because the time to maturity is greater for a

given transaction cost. Should investors believe that credit ratings truly proxy for credit worthiness, they may prefer to transact in corporate bonds with higher ratings. Different credit ratings may also attract different type of traders which could affect their liquidity. Lastly, corporate bonds subject to Rule 144A may trade differently than non-144A corporate bonds.⁵⁵

FINRA further proposes to rotate pilot bonds halfway through the pilot. After 126 days of trading—there are approximately 252 trading days per year—bonds that are initially randomized to one of the test groups would be rotated to the control group, and the bonds initially in the control group would be divided equally into the three test groups. The sole exceptions to the rotation approach would be bonds that are newly issued close to the rotation date, or bonds that default during the pilot. New issues that trade fewer than 50 total trading days before rotation occurs on the 126th day of the pilot would not be moved from the test or control group to which they were initially randomized, and bonds that default would not be moved from the test or control group to which they were initially randomized. Rotation of the bonds between test and control group is intended to address concerns that test and control assignment could impose unfair costs and burdens.⁵⁶

FINRA understands that a potential consequence of the proposed rotation is that market participants may have different expectations about the impact of delayed dissemination or an increase in cap size for test and control group bonds at the pilot's start than at the time when rotation occurs. As a result, the evidence generated from the first half of the pilot may differ from that of the second half. If so, interpretation may be more difficult because of potential differences that may arise from latent differences in bond assignment to a given test group as market participants update expectations from learning. However, if market participants quickly understand the impact of a change in transparency, then bonds initially randomized to a given Test Group in the first 126-day period are likely to be affected in a similar manner by the same change in transparency when bonds in the control group are randomized to the same Test Group in the second 126-day period. The list of existing CUSIPs assigned to each Group will be publicly posted before the proposed pilot begins and before rotation. In addition, the list of assigned CUSIPs will be updated throughout the term of the pilot as new issues are assigned to pilot groups.

Methodology

This section provides a high-level description of the proposed criteria for evaluating the impact of the pilot.

The primary method proposed to evaluate the impacts associated with the pilot is a “difference-in-difference” method used by academics to identify changes in transparency on corporate bond trading from the implementation of TRACE. The benefit of employing this method is that it is generally accepted as an effective way to assess changes in transparency for corporate bonds and it permits a comparison of the pilot’s findings to earlier studies. There are two types of comparisons that are made in this difference-in-difference pilot design. The first comparison is the effect of a change in transparency on a given outcome variable by comparing the outcome variable’s average change over time for a Test Group versus its control group. For example, one may examine the difference in average transaction costs between bonds in Test Group 1, which would be subject to a dissemination delay, versus those in the control group, which would not be subject to a dissemination delay. The second comparison is the effect of a change in transparency on a given outcome variable by comparing the outcome variable’s average change over time for one Test Group versus another Test Group. For example, one may examine the difference in average transaction costs between bonds in Test Group 1, which would be subject to a dissemination delay, versus those in Test Group 2, which would be subject to increased dissemination caps.

By construction, Test Group 1 reduces transparency by introducing a dissemination delay. The identification strategy is to compare the effect of the dissemination delay on outcome measures, such as aggregate trading volume including the amount attributable to institutional and non-institutional sized trades, transaction costs and market participation for bonds in Test Group 1 versus the control group and bonds in Test Group 1 versus Test Group 2 or 3.

Test Group 2 potentially improves size transparency, with no change to price transparency, by increasing the dissemination cap, thereby increasing the number of bond trades subject to uncapped dissemination, without imposing any dissemination delay. This identification strategy compares bonds in Test Group 1 versus the control group and bonds in Test Group 2 versus Test Group 1 or 3.

Test Group 3 combines these two primary elements of the FIM SAC Recommendation. By construction, it potentially mitigates the reduction in transparency relative to Test Group 1 by increasing the dissemination caps, thereby increasing the number of bond trades subject to real-time, uncapped dissemination and reducing the number of trades that are subject to a dissemination delay. At the same time, Test Group 3 reduces transparency relative to Test Group 2 by introducing a dissemination delay for the size capped trades. This identification strategy compares the effect of the dissemination delay with increased cap size to the control group in addition to the other two test groups. Test Group 3 permits a comparison of the joint effect of the dissemination delay or increased cap size relative to trades affected by a lower threshold for a delayed dissemination alone in Test Group 1⁵⁷ or an increased cap alone in Test Group 2.

The proposed pilot tests delayed dissemination versus a new trade size dissemination cap. Such a design permits those evaluating the pilot to discriminate between the relative impacts of each of those changes and assess the trade-off between the two elements. In this framework, for example, the public would be able to assess directly how any benefits arising from increasing the trade size dissemination cap offsets any costs associated with delaying any dissemination of larger sized trade reports. Without this framework, such a comparison would likely be extremely uncertain.

In order to best provide this comparability, the proposed pilot would extend the trade delay beyond the FIMSAC Recommendation to the current trade size dissemination caps in one of the test groups for the duration of the pilot. The FIMSAC Recommendation does not provide evidence for the basis of the thresholds recommended. If those thresholds best reflect the trade-off between investor protection and well-functioning markets, extending the reporting delay to more trades may impose greater costs than intended by the FIMSAC.

FINRA considered alternatives that would potentially avoid these costs. One option considered was to limit the dissemination delay in Test Group 1 to the FIMSAC recommended thresholds of \$10 and \$5 million respectively for IG and non-IG bonds, without increasing the dissemination caps for Test Group 1. In other words, under this alternative construction for Test Group 1, for an IG bond in Test Group 1, a trade with a size of \$6 million par value would not be subject to the 48-hour dissemination delay and would be disseminated immediately according to current dissemination caps with a capped size of \$5MM+. For the same IG bond under this alternative construction for Test Group 1, a trade with a size of \$11 million par value would be subject to the 48-hour dissemination delay and would be disseminated after the delay according to current dissemination caps with a capped size of \$5MM+. FINRA recognizes that such an alternative construction would conflate the impact of both the delay and the change in the dissemination caps. Accordingly, FINRA believes this alternative would be more likely to provide evidence that is harder to interpret. FINRA asks commenters to consider the importance of design and how it can affect the ability of FINRA, the SEC and the public to evaluate the outcome of the pilot in their comments.

Outcome Measure and Research Questions

As FIMSAC's proposed pilot is a test of a joint hypothesis, FINRA suggests that the optimal experimental design is a direct test of the delay in the dissemination of block trades, an increase in the cap size and a dissemination delay combined with an increased cap size to determine whether dealers will provide increased liquidity for block trades. To this end, FINRA solicits comments on whether this proposed pilot can provide reliable answers to the following research questions organized by type of measure, and if so, how these questions would be measured empirically.

1. Trade-based

Is either a dissemination delay or a delay with increased cap associated with changes in aggregate trading activity?

In particular, does a decrease in transparency:

1. increase trading activity;
2. increase liquidity⁵⁸;
3. decrease time between transactions; or
4. decrease uncertainty/error in prices?

2. Blocks and block activity

Are there differences in block trading between groups at the threshold where the dissemination is delayed or the dissemination is delayed with increased cap?

In particular, does a decrease in transparency:

1. increase the frequency or size of block trades;
2. decrease liquidity in block trades; or
3. increase the time between block trades?

3. Trading costs

Is either a dissemination delay or a delay with increased cap associated with changes in trading costs for investors?

In particular, does a decrease in transparency:

1. decrease transaction costs (*e.g.*, dealer roundtrip costs); or
2. decrease costs from adverse selection (*i.e.*, price impact)?

4. Dealer behavior

Is either a dissemination delay or a delay with increased cap associated with changes in dealer behavior?

In particular, does a decrease in transparency:

1. increase market making (measured as volume or inventory) of large broker-dealers that are active in blocks;
2. benefit large broker-dealers that are active in blocks at expense of less informed ones in trades when block traders have an information advantage after the block executes but before that transaction is disseminated; or
3. increase the probability of gaming by dealers, for example, altering their trading pattern to selectively release prices or make information more asymmetric?

5. Dealer compensation

Is either a dissemination delay or a delay with increased cap associated with changes in dealer compensation?

In particular, does a decrease in transparency:

1. increase the likelihood of principal activity relative to agency trades;
2. increase markups;
3. decrease the size of dealer networks; or
4. increase profitability of larger dealers at center of the dealer network?

6. Buy side behavior

Is either a dissemination delay or a delay with increased cap associated with increased adverse selection for less informed institutional investors?

In particular, does a decrease in transparency benefit more informed institutional investors at expense of less informed institutional investors?

7. ETFs, mutual funds and derivative markets

Bond ETFs and bond mutual funds derive their value from an underlying basket of corporate bonds. Efficient pricing of these derivative baskets and their individual securities requires up-to-date information on the pricing of holdings. Is either a dissemination delay or delay with increased cap associated with more pricing errors in ETFs, mutual funds or derivatives? Are these delays associated with profitable trading strategies for these instruments by market participants that trade blocks of securities that underlie the instruments and are subject to delayed dissemination?

In particular, does a decrease in transparency:

1. decrease the accuracy of average ETF and mutual fund pricing;
2. increase the information content in ETFs and mutual funds associated with more informed market participants relative to others; or
3. increase profitable trading of derivatives by dealers that trade blocks in corporate bonds?

Economic Impact Assessment

FINRA developed the pilot proposal described in this *Notice* based on the FIMSAC Recommendation. The discussion below presents a framework to evaluate the potential economic impacts of the specific changes recommended by the FIMSAC. However, as discussed throughout the *Notice*, there are different views on the need for and potential impact of studying these changes as a pilot. As the SEC has discussed, pilot studies may be particularly useful to inform policy decisions where there is not sufficient empirical evidence otherwise available. For example, when the SEC adopted the Transaction Fee Pilot, it explained the pilot was needed because available data was too limited to permit researchers to isolate and study the contested policy issue in question—specifically, the impact of transaction fees on order routing behavior, execution quality and market quality. Accordingly, the SEC stated that the Transaction Fee Pilot was uniquely capable of generating the empirical evidence to inform regulatory decisions.⁵⁹ The SEC further noted that better informed regulatory decisions generally are more likely to result in regulatory approaches that better balance costs and benefits relative to regulatory decisions based on less precise information.⁶⁰

The SEC also recognized that pilots may impose costs and can face limitations that may impact pilot design. The SEC noted that pilots can be unpredictable and may face the limitation that market participants may adjust their behavior differently for a pilot than for a rule change.⁶¹ In addition, while the pilot described in this *Notice* may impose less compliance cost because it does not require any change to the way market participants report trades to TRACE, the pilot likely will impose some costs on market participants to remain aware of the dissemination protocols associated with the bonds in each pilot group. This is in addition to the costs discussed below concerning the changes that would be implemented by the pilot.

FINRA includes questions below and encourages comments on the need for and potential impacts of studying the recommended changes with a pilot, including whether the current data is sufficient or insufficient to inform the policy questions raised by the FIMSAC Recommendation, whether the proposed pilot's benefits outweigh the costs, and whether other methods or data sets should be considered rather than a pilot to measure impacts or "lost opportunities" to trade.

Economic Baseline

The current regime of post-trade transparency was created with the introduction of TRACE in 2002. Since then, as noted above, numerous studies examined the impact of TRACE post-trade transparency on the liquidity and competitiveness of the U.S. corporate bond market. The current market conditions inform the economic baseline and are the result of these impacts. The studies of the impacts serve as reference in evaluating the effect(s) of the pilot.

Several papers examined the impact of transparency on realized bid-ask spread, which is considered either as a proxy for liquidity or the transaction cost of a customer roundtrip (completing a buy and sell of a corporate bond). These papers concluded that the increased transparency associated with TRACE transaction reporting is generally associated with a substantial decline in investors' trading costs and the cost reduction is greater for smaller trade sizes, potentially accruing to retail investors.⁶² Researchers also found reductions in intraday price dispersion, which could translate into reductions in trading costs.⁶³ Some studies found that trading volume in the dealer market had remained the same or decreased with the introduction of TRACE; a possible explanation was that TRACE might have helped trading volume shift to the electronic platform.⁶⁴ Other studies examined the impact on dealer competition and found evidence of increased competitiveness of small dealers.⁶⁵ Finally, another study found improved valuation precision of mutual funds holdings in the presence of increased TRACE transparency.⁶⁶

This section briefly describes the market for corporate bonds as captured by the TRACE dataset, focusing on the sample of transactions in pilot eligible corporate instruments reported to TRACE in calendar year 2018. Pilot-eligible securities are defined as non-convertible, callable and non-callable TRACE-eligible corporate debt securities, including 144A bonds (and excluding religious institution bonds and equity linked notes).

Table 1 presents secondary market trading statistics of corporate bonds grouped by the bond characteristics used for stratification in the pilot. In particular, it shows the number of CUSIPs, total par value traded and mean par value per trade in calendar year 2018.⁶⁷ TRACE data indicates that 32,408 bonds were traded in 12.4 million transactions during calendar year 2018. During that same period the total par value traded was \$7.0 trillion, and the average par value per trade was \$561.4 thousand.

Table 1: Number of Issues, Trades, and Par Value Traded by Issue Size, Issue Age, and Rating for 144A and Non-144A Corporate Bonds in 2018

Type: Non-144A, Rating: IG					
Issue Size	Issue Age	No. of Issues by CUSIP	No. of Trades	Total Par Value Traded (Billion)	Mean Par Value by Trade (Thousand)
<\$500MM	< 1 year	2,013	175,176	\$87.7	\$500.4
	≥ 1 year	8,480	1,365,442	\$253.6	\$185.7
\$500MM - \$1B	< 1 year	995	392,179	\$353.6	\$901.6
	≥ 1 year	2,786	1,767,650	\$637.8	\$360.8
≥ \$1B	< 1 year	767	709,245	\$900.6	\$1,269.7
	≥ 1 year	2,243	4,210,236	\$1,820.0	\$432.3
Type: Non-144A, Rating: Non-IG					
Issue Size	Issue Age	No. of Issues by CUSIP	No. of Trades	Total Par Value Traded (Billion)	Mean Par Value by Trade (Thousand)
<\$500MM	< 1 year	6,367	136,756	\$51.9	\$379.5
	≥ 1 year	6,357	711,556	\$141.0	\$198.1
\$500MM - \$1B	< 1 year	502	160,737	\$129.3	\$804.2
	≥ 1 year	659	900,140	\$310.3	\$344.7
≥ \$1B	< 1 year	349	156,818	\$203.9	\$1,300.4
	≥ 1 year	400	848,115	\$517.3	\$610.0
Type: 144A, Rating: IG					
Issue Size	Issue Age	No. of Issues by CUSIP	No. of Trades	Total Par Value Traded (Billion)	Mean Par Value by Trade (Thousand)
All	All	2,537	246,489	\$587.0	\$2,381.6
Type: 144A, Rating: Non-IG					
Issue Size	Issue Age	No. of Issues by CUSIP	No. of Trades	Total Par Value Traded (Billion)	Mean Par Value by Trade (Thousand)
All	All	2,571	650,020	\$984.7	\$1,514.8
Types: 144A and non-144A, Ratings: IG and Non-IG					
Issue Size	Issue Age	No. of Issues by CUSIP	No. of Trades	Total Par Value Traded (Billion)	Mean Par Value by Trade (Thousand)
All	All	32,408	12,430,559	\$6,978.5	\$561.4

Sample includes secondary market trading of corporate bonds in TRACE in 2018. Bond reference data are from Thomson Reuters. The sample excludes convertible bonds, church bonds, and equity linked notes.

Table 2 describes the mean number of trades and par value traded by CUSIP and per day in calendar year 2018. The average bond was traded 384 times with a total traded par value per CUSIP of \$215.3 million in 2018. An average of 49,524 trades representing \$27.8 billion in par value exchanged hands per day. Larger issues were traded more frequently and typically in larger trade size.

Table 2: Mean Number of Trades and Par Value Traded by CUSIP and Mean Number of Trades and Par Value Traded Per Day by Issue Size, Issue Age, and Rating for 144A and Non-144A Corporate Bonds in 2018

Type: Non-144A, Rating: IG					
Issue Size	Issue Age	Mean Trades Per CUSIP	Mean Par Value Per CUSIP (Million)	Mean Trades Per Day	Mean Par Value Per Day (Million)
<\$500MM	< 1 year	87	\$43.5	698	\$349.3
	≥ 1 year	161	\$29.9	5,440	\$1,010.4
\$500MM - \$1B	< 1 year	394	\$355.4	1,562	\$1,408.7
	≥ 1 year	634	\$228.9	7,042	\$2,541.1
≥ \$1B	< 1 year	925	\$1,174.1	2,826	\$3,587.9
	≥ 1 year	1,877	\$811.4	16,774	\$7,250.9
Type: Non-144A, Rating: Non-IG					
Issue Size	Issue Age	Mean Trades Per CUSIP	Mean Par Value Per CUSIP (Million)	Mean Trades Per Day	Mean Par Value Per Day (Million)
<\$500MM	< 1 year	21	\$8.2	545	\$206.8
	≥ 1 year	112	\$22.2	2,835	\$561.6
\$500MM - \$1B	< 1 year	320	\$257.5	640	\$515.0
	≥ 1 year	1,366	\$470.9	3,586	\$1,236.3
≥ \$1B	< 1 year	449	\$584.3	625	\$812.4
	≥ 1 year	2,120	\$1,293.3	3,379	\$2,061.0
Type: 144A, Rating: IG					
Issue Size	Issue Age	Mean Trades Per CUSIP	Mean Par Value Per CUSIP (Million)	Mean Trades Per Day	Mean Par Value Per Day (Million)
All	All	97	\$231.4	982	\$2,338.8
Type: 144A, Rating: Non-IG					
Issue Size	Issue Age	Mean Trades Per CUSIP	Mean Par Value Per CUSIP (Million)	Mean Trades Per Day	Mean Par Value Per Day (Million)
All	All	253	\$383.0	2,590	\$3,922.9
Types: 144A and non-144A, Ratings: IG and Non-IG					
Issue Size	Issue Age	Mean Trades Per CUSIP	Mean Par Value Per CUSIP (Million)	Mean Trades Per Day	Mean Par Value Per Day (Million)
All	All	384	\$215.3	49,524	\$27,803.0

Sample includes secondary market trading of corporate bonds in TRACE in 2018. Bond reference data are from Thomson Reuters. The sample excludes convertible bonds, church bonds and equity linked notes. Trading per CUSIP is calculated from the bonds that had at least one trade during 2018.

Table 3 reports the number of issues, trades, total and mean par value traded per day by rating and trade size for all corporate bonds in the year 2018. The table indicates that there were significantly more trades in smaller size than in larger institutional sizes, yet this is not true for the total dollar par value traded. For example, there were 31,628 trades of less than \$1 million per day for investment grade bonds, but only 403 trades of larger than \$10 million. Yet the total par value traded in less than one million dollar trades is \$2.8 billion, compared to \$6.3 billion for trades larger than \$10 million.

Table 3: Number of Issues, Trades, Total Par Value Traded, and Mean Par Value Traded Per Day by Rating and Trade Size for 144A and Non-144A Corporate Bonds in 2018

Rating: IG					
Trade size	No. of Issues	No. of Trades	Total Par Value Traded (Billions)	No. of Trades Per Day	Mean Par Value Traded Per Day (Billions)
<= \$1MM	17,963	7,938,729	\$698.1	31,628	\$2.8
\$1MM - \$5MM	11,538	654,578	\$1,334.0	2,608	\$5.3
\$5MM - \$10MM	9,579	172,675	\$1,040.7	688	\$4.1
> \$10MM	8,045	100,435	\$1,567.4	403	\$6.3
Rating: Non-IG					
Trade size	No. of Issues	No. of Trades	Total Par Value Traded (Billions)	No. of Trades Per Day	Mean Par Value Traded Per Day (Billions)
<= \$1MM	15,688	2,912,626	\$342.2	11,604	\$1.4
\$1MM - \$5MM	5,703	531,072	\$1,053.2	2,116	\$4.2
\$5MM - \$10MM	4,284	91,912	\$530.6	369	\$2.1
> \$10MM	3,280	28,532	\$412.4	115	\$1.7

Sample includes secondary market trading of corporate bonds in TRACE in 2018. Bond reference data are from Thomson Reuters. The sample excludes convertible bonds, church bonds and equity linked notes.

Figure 1 presents the number of new issuances per year by type, grade and size for each year from 2009 to 2018. The period post-2009 shows a strong secular growth in new corporate bond issuance. The issuance of non-IG, non-144A and smaller issue size (size less than \$500 million) corporate bonds increased 536% from 2009 to 2018. The issuance of IG, non-144A corporate bonds increased for all issue sizes.

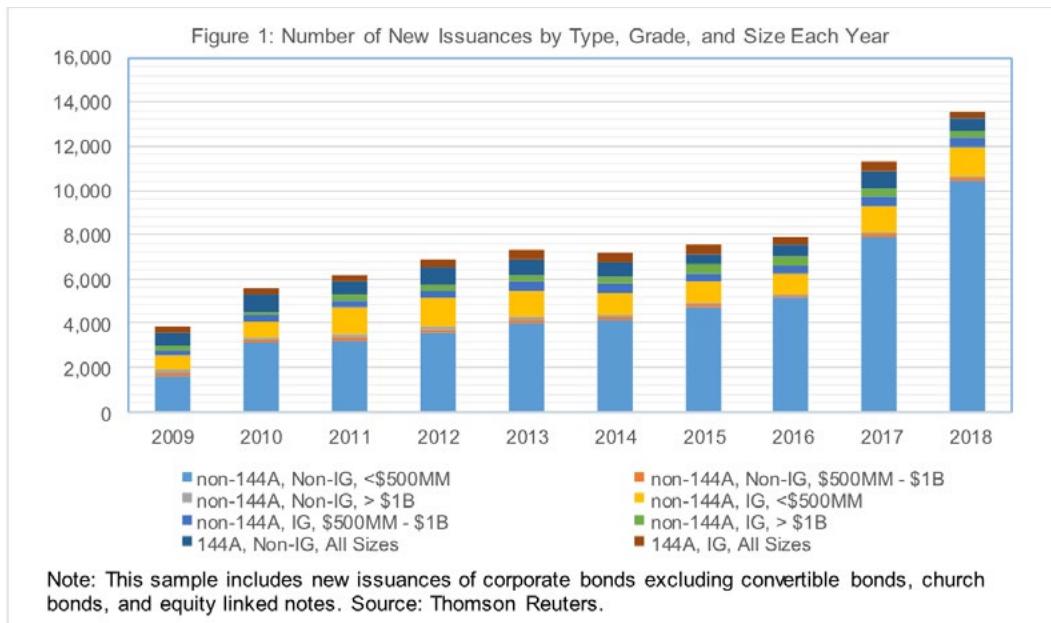


Figure 2 presents the par value of new issuances per year by type, grade and size for each year from 2009 to 2018. For non-144A and non-IG issues, issuances of less than \$500 million increased 48.3%, \$500 million to \$1 billion increased 39.8%, while larger than \$1 billion decreased 21.6%. For non-144A and IG issues, issuances of less than \$500 million increased 2.4%, \$500 million to \$1 billion increased 92.9%, while larger than \$1 billion increased 24.5%.

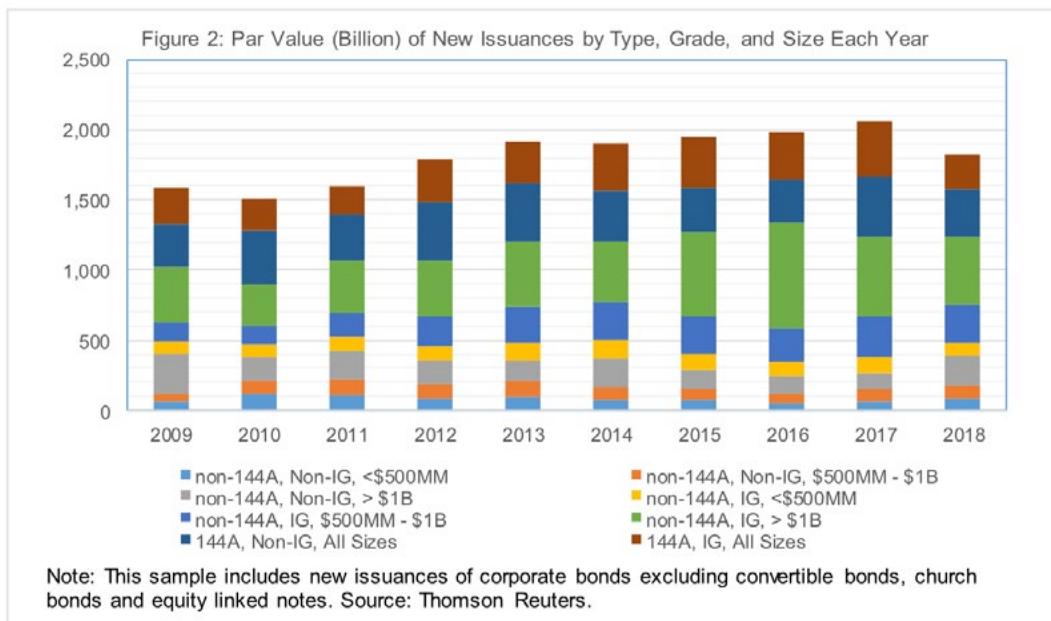
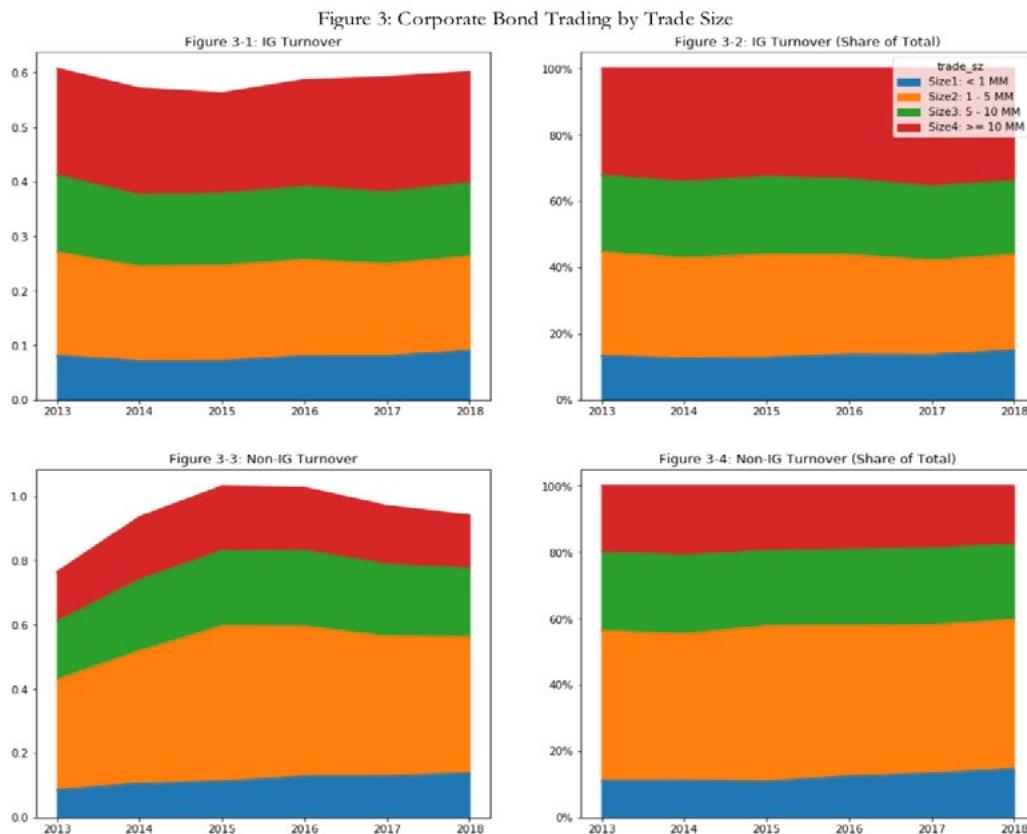


Figure 3 shows secondary market trading of corporate bonds in TRACE from 2013 to 2018.⁶⁸ The sample reflects the set of corporate bonds proposed to be included in the pilot. To account for the difference in total bonds outstanding across years, annual traded dollar par value is standardized by the total dollar par value of outstanding bonds as of June 30th of the corresponding year.

Figure 3-1 indicates that there has been some time series variation in IG bond turnover, but the aggregate difference over the period is very small ranging from 0.608 in 2013 to 0.602 in 2018. There appears to be at least some secular growth in the turnover from smallest and largest trade size groupings. Figure 3-2 represents the share that each trade size group represents as a fraction of all trading activity. In this view, the share of trades in IG bonds less than \$1 million increased from 13.4% in 2013 to 15.0% in 2018. The share of trades larger than \$10 million increased from 32.1% in 2013 to 33.8% in 2018.

For non-IG bonds, Figure 3-3 shows that total turnover increased from 76.4% in 2013 to 94.2% in 2018. Turnover is generally increasing for smaller trade sizes. Figure 3-4 shows that the share of trades less than \$1 million increased from 11.2% in 2013 to 14.6% in 2018. The share of trades larger than \$10 million decreased from 20.0% in 2013 to 17.6% in 2018.



Sample includes secondary market trading of corporate bonds in TRACE. The sample excludes convertible bonds, church bonds, and equity linked notes. Annual traded dollar par value is divided by the total dollar par value of outstanding bonds at June 30th of the corresponding year.

Economic Impacts

A discussion of the anticipated economic impacts, including costs and benefits associated with each pilot test group, is presented below. Based on the sample population affected by the pilot, approximately 3% and 18% of trades and 56% and 85% of par volume in investment grade and non-investment grade bonds may be candidates subject to delayed dissemination at some point during the pilot. Similarly, based on the sample population affected by the pilot, approximately 2% and 15% of trades and 22% and 45% of par volume in investment grade and non-investment grade bonds may be candidates potentially affected by the pilot cap size change. These estimates do not account for changes in behavior in response to the pilot.

Test Group 1: 48-hour Dissemination Delay with No Change to Dissemination Caps

Potential Benefits

The primary goal of the FIMSAC Recommendation is to test whether delayed dissemination of reported transactions can increase liquidity in blocks, without imposing significant indirect and direct costs on market participants and investors. The FIMSAC Recommendation and supporting comments cite observational evidence that finding block-size liquidity in the current market (*i.e.*, the baseline) may be difficult because of the relatively quick publication of post-trade prices. Although TRACE post-trade transparency lowers transaction costs for market participants, proponents of the dissemination delay believe that post-trade transparency may impose costs on dealers and other liquidity providers by making public valuable trade information. When larger trades are publicly disseminated, dealers with recently acquired blocks may be more vulnerable to adverse price movements from traders who are aware of these recent executions. This may cause larger trades to incur greater costs for dealers, which could reduce the incentive for them to provide liquidity in blocks or require them to receive greater compensation for providing block liquidity.

Under this rationale, providing a delay in dissemination for larger trade sizes could be associated with greater provision of liquidity to those seeking to conduct larger trades. Delayed dissemination of large trades could provide dealers with more time to offset positions. During the delayed dissemination, dealer positions may be less vulnerable to price movements that negatively impact profits, because other traders have less information on these recent large trades. Consequently, existing dealers of large trade sizes may trade larger trade sizes more frequently, further increase the size of larger trades, or offer more attractively priced quotes. The benefits from the dissemination delay may disproportionately accrue to dealers who trade larger sizes, if transaction prices convey information about bond quality or future prices that are no longer shared.

Institutional investors may also benefit, as they may trade faster or more frequently because dealers might find counterparties faster or carry more inventory. In addition, institutional investors might save time and effort in contacting dealers for quoted prices, as more dealers may be willing to provide aggressively priced bid-ask quotes or trade in larger size. If liquidity in larger trade sizes improves for particular bonds and these bonds are a close substitute for bonds that are typically more costly to trade, then institutional investors may benefit from substituting a more liquid bond for a less liquid one.

This benefit may be limited to the extent block-size trades are not relatively more difficult to execute in the current market, as suggested in certain of the baseline data discussed above.

Potential Costs

Dealers and institutional investors that regularly transact in these larger block sizes would have more non-public information during the dissemination delay than in the absence of the pilot. This may give them an even greater competitive advantage during that 48-hour dissemination delay window relative to market participants who do not typically trade these larger blocks. Back, Liu and Tequia (2018) theoretically showed that disclosure of transaction prices conveys information on the security's quality and reduces dealer's rents when trading inventory in the secondary market. Consequently, the reduction in transparency could potentially reduce information content of prices and could increase dealers' rents. Dealers and institutional investors that trade larger sizes may profit from this informational advantage on trade prices at the expense of dealers and investors that do not larger block sizes.

This economic rent is a cost imposed by Test Group 1 from the perspective of market participants not regularly transacting in blocks subject to the 48-hour dissemination delay. Smaller brokers that do not regularly trade blocks benefitting from the 48-hour dissemination delay may be more likely to provide less attractively priced quotes, thereby increasing trading costs, or reduce the size at a given quoted price. Under this scenario, retail traders may find increased costs and lower returns from participating in the corporate bond market. Furthermore, some institutional investors and less active dealers may need to contact more dealers, thereby increasing search costs.

Delayed reporting of large trades could increase price uncertainty to less informed traders, thereby potentially reducing liquidity in corporate bonds. Delayed block price reporting exposes buy and sell side participants to additional risk, as they may be transacting at prices inferior to those that they would have accepted had dissemination of block trades not been delayed. Limited information on large transactions is particularly problematic during periods of market stress when the benefit of timely pricing information is large. It may also introduce misleading information to the market about supply and demand conditions, with particular impacts on smaller dealers, as noted in the Harris Letter.

An implicit assumption of the FIMSAC Recommendation is that an increase in the size or frequency of block trades or improved ability for dealers to manage inventory risk associated with block trades will improve fixed income market quality. In addition to the informational advantages that might accrue to dealers participating in block trades discussed above, the ability of those dealers to reduce their inventory risk exposures more quickly or more easily where they take on large positions may effectively represent a risk transfer between those dealers and the ultimate holders of the securities. The aggregate efficiency of the transfer depends, in part, if the resultant prices reflect the risk transfer and on whether the dealer or the ultimate customer represents the most efficient holder of the risk.

Authorized participants (APs) are important to the creation and redemption process for exchange-traded funds (ETFs). These market participants have the exclusive right to change the supply of ETF shares on the market. When they identify a shortage of ETF shares in the market, they create more shares by buying the underlying corporate bonds. Conversely, when there's an excess supply of ETF shares on the market, they reduce the number of ETF shares by selling the underlying corporate bonds. Price transparency helps ensure that APs and other market makers engaged in deposit and redemption transactions continue to participate in the markets. As their trades facilitate liquidity transfer, they tend to stabilize prices. This creation and redemption mechanism keeps the share price of an ETF aligned with its underlying NAV.

The impact of delayed reporting may well have an amplified effect on securities deriving their value from corporate bonds. The impact could lead to less efficient pricing of index-based products, such as ETFs, and derivatives, such as total return and credit default swaps. If the pilot makes it more difficult to mark-to-market the relevant securities, market participants, who do not trade blocks benefitting from delayed reporting dissemination, may be more likely to use stale prices for operational and accounting purposes. For example, ETFs and mutual funds may incorrectly estimate net asset value with greater probability. In addition, market makers that do not trade these blocks may not be able to confidently assess the price at which the basket of bonds and bonds should trade. Consequently, market makers may provide less attractively priced quotes or be less willing to take on inventory. Such an outcome could suppress innovation, such as electronification of the corporate bond market.

There is a potential for spillover effects in demand and liquidity for bonds that trade less frequently, because these instruments are typically priced using matrix pricing or other relative valuation methods. In this view, decreasing certainty about the primary instrument could lead to greater market uncertainty about securities whose value is assigned on a relative basis, whether or not those bonds are likely to trade in block size.

Test Group 2: Increased Dissemination Caps with No Dissemination Delay**Potential Benefits**

The incremental increase in size transparency is limited to observing the actual size on trades between \$1 million and \$5 million for non-IG and between \$5 million and \$10 million for IG corporate bonds. There is no change in price transparency in Test Group 2 relative to the baseline. If transaction costs are decreasing in trade size (as found by Edwards, Harris and Piwowar (2007)) and the differences in trade size within this group are economically important, then the increased transparency with respect to size may help some investors better interpret the price for trades. This would potentially improve price formation for these bonds and for ETFs and other derivatives that contain bonds that are frequently traded in the size between \$1 and \$5 million and between \$1 and \$10 million for non-IG and IG corporate bonds.

Potential Costs

If the optimal size trade for some institutional investors is between \$1 and \$5 million and \$5 and \$10 million for non-IG and IG corporate bonds, then a change in the dissemination caps could impose costs, such as price impact, on these institutional investors or on overall market efficiency.

If these same investors choose to trade in a size above the new \$5 and \$10 million cap thresholds, then delayed reporting of large trades may encourage traders to trade blocks with qualifying size rather than the typical smaller blocks or blocks broken into smaller pieces. This could decrease price and size transparency, which may distort incentives to trade slowly and responsibly.

Test Group 3: 48-Hour Dissemination Delay and Increased Dissemination Caps**Potential Benefits and Costs**

Test Group 3 has the same potential benefits that are described above for Test Group 1 and 2. These benefits are not outlined again for the purpose of brevity.

However, the increase in dissemination caps limits the costs and benefits to Test Group 1 to only those trades executed at sizes above the increased trade dissemination caps of Test Group 2. This is anticipated to mitigate the informational advantage accruing to dealers and institutional investors who trade blocks created by the 48-hour dissemination delay that is evaluated in Test Group 1.

Alternatives Considered

As discussed above, FINRA considered but is not proposing to design the pilot without a control group, as the FIMSAC recommended.

Also discussed above, FINRA considered alternate specification of Test Group 1 to limit its application to only those trades with reported size at or above the new dissemination cap recommended by the FIMSAC.

In addition, consistent with another part of the FIMSAC proposal, FINRA considered disseminating the actual trade size of capped transactions three months instead of six months after the end of the calendar quarter in which they are reported. The rationale for not proposing this modification is: (1) its impact on block size trades in corporate bonds would be difficult to evaluate given the pilot's proposed duration is one year, and (2) it would add additional complexity to the pilot.

Finally, FINRA considered a number of alternatives in the specification of the pilot, including the set of bonds eligible for the pilot, the characteristics necessary for control in the stratified assignment to test groups and the appropriate length of time for the pilot. FINRA requests comments on these topics.

Request for Comment

FINRA requests comment on all aspects of the proposal. FINRA requests that commenters provide empirical data or other factual support for their comments wherever possible. FINRA specifically requests comment concerning the following questions:

Comments on the Need for the Pilot

1. Is there a need for this pilot? What evidence can you provide to support this conclusion?
2. Is the objective of the pilot clearly defined?

Comments on the Potential Impact of the Pilot

1. What potential impacts of the pilot does this proposal fail to consider or inadequately describe?
2. Are there particular risks, economic or otherwise, inherent in a pilot that reduces transparency that already exists in the marketplace?
3. One suggested need for the pilot is that block size transactions have become substantially more difficult to execute and may result in breaking the block into smaller transactions. To the extent blocks have in fact become more difficult to trade, is this a valid concern? Do potential delays in block size trades and related strategies to execute those block trades, such as more smaller-size trades, lead to a more accurate and appropriate risk transfer? Would delays in dissemination improperly mask the risk of block-size trades to the individual firm and instead shift such risk to other market participants or the overall market?

4. FINRA cannot directly measure the impact on “lost opportunities,” particularly to asset managers. How would this negatively impact the success of the pilot? What other measure or data sets should FINRA consider in order to measure “lost opportunities” to trade?
5. Are there ways market participants can alter their behavior during the course of the pilot to affect its outcome? What are other similar negative impacts or concerns that could occur as a result of the pilot? What changes can FINRA make to the pilot design to limit or mitigate the impact of such “gaming”?

Comments on Pilot Design

1. Is the pilot adequately designed with respect to its objective?
2. Are Test Groups 1, 2 and 3 and the control group clearly defined?
3. What should the test groups be?
4. Is it appropriate to have a market-wide pilot or should it be limited to a small number of CUSIPs?
5. Should other types of securities, aside from corporate bonds, be included in the pilot?
6. Should the corporate bond CUSIPs in Test Groups 1, 2 and 3 switch with those in the control group with respect to the three treatments, which are the dissemination delay, dissemination cap, dissemination cap and delay?
7. Should all of the CUSIPs in each test group be published or should some or all not be made known?
8. Should the pilot include a control group?
9. Should the test groups be designed such that the impact is limited to the thresholds identified in the FIMSAC Recommendation? Is it appropriate to expand the test in the way proposed in the pilot design here?
10. Does the pilot propose to use the most appropriate outcome measures? If not, which ones are preferable and why?
11. Is the proposed methodology of examining pilot data appropriate?
12. Are the dimensions on which the corporate bonds are sorted (size of issue, age of issue, rating and 144A versus non-144A categories) appropriate? If not, which additional dimensions should be included (*e.g.* inclusion status with respect to an index or ETF, maturity, standardized versus complex, degree of substitutability for other CUSIPs, mean frequency of trading in prior year, etc.)?
13. Are there other methods that could be used to determine the control and test groups? For example, should the corporate bonds be assigned to the control group and test groups by a more random approach—such as based on the last digit of the CUSIP for each bond, instead of assigning bonds to groups based on the stratification characteristics like those discussed above (size of issue, age of issue, rating and 144A status)?

14. How should FINRA seek to measure the impact of the pilot on assets that derive their value from corporate bonds, such as ETFs and mutual funds?
15. Should the pilot's duration be increased to two years to better incorporate trading in illiquid corporate bonds?
16. Is there a risk that traders can easily substitute CUSIPs in a test group for ones in the control group? If so, to what extent might this happen and on which dimensions (*e.g.* CUSIP from the same issuer, CUSIP from a different issuer having the same maturity and age)?
17. Are there additional research questions that should be addressed?
18. Are there other changes to the pilot that should be considered to better study the impact of dissemination (*i.e.*, transparency) on the corporate bond market?
19. Should the dissemination delay or caps only apply to trades on which a broker-dealer makes a capital commitment?
20. Will market participants and other users of the TRACE data need to make any system changes as a result of the pilot? For example, will pricing, compliance or other systems, including systems used to determine or supervise prevailing market price for fair pricing and calculating mark-ups for retail and other customers, need to be updated to reflect delayed dissemination of certain trades? If so, how long will those changes take to implement and what would be the estimated costs associated with such changes?
21. Should new issues be randomized to test groups or the control group while controlling for the issuer?

Comments on the Economic Impact Assessment

1. Does the economic baseline accurately describe current trading of TRACE-reportable corporate bonds?
2. What will be the overall impact of the pilot on liquidity, trade size, competition among dealers or competition among issuers?
3. With respect to the 48-hour dissemination delay (*i.e.*, Test Group 1), have its benefits or costs be adequately described?
 - a. Will the 48-hour dissemination delay improve liquidity for those trade sizes affected? If so, would transaction costs decline, or trade sizes or dealer inventory increase? Would buy-side firms need to contact fewer dealers for quotes?
 - b. Would traders that do not typically trade the sizes affected by the dissemination delay be negatively affected by the informational asymmetry? If so, how?
 - c. Would delayed reporting have an amplified effect on securities deriving their value from corporate bonds leading to ineffective pricing of index-based products, such as ETFs, and derivatives, such as total return and credit default swaps?

- d. Would the reduced price transparency caused by the 48-hour dissemination delay have particular impacts on retail investors, for example, by reducing the market information used to determine prevailing market price for fair pricing and to calculate mark-ups?
4. With respect to the increased dissemination caps (*i.e.*, Test Group 2), have its benefits or costs been adequately described?
 - a. Would the increase in the reporting cap size mitigate the informational advantage accruing to dealers and institutional investors who trade blocks created by the 48-hour dissemination delay? If so, would smaller dealers step in and begin providing quotes for trades having benefited from the increased reporting cap?
 - b. If trade sizes do increase in response to the increase in the reporting cap size, are traders more likely to trade blocks with qualifying size rather than the typical smaller blocks or blocks broken into smaller pieces?
5. With respect to the increase of the reporting cap size and the 48-hour dissemination delay (*i.e.*, Test Group 3), have its benefits and costs relative to Test Group 1 or 2 been adequately described?
6. The comparison of Test Group 3 and Test Group 1 is confounded by the increase in the threshold for the dissemination delay. Should FINRA consider the alternative construction for Test Group 1 discussed above, where Test Group 1 would maintain the current size dissemination cap while implementing a delay threshold consistent with the threshold in Test Group 3? Would such an alternative construction for Test Group 1 provide a cleaner test of the impact of the dissemination delay? Would such an alternative construction for Test Group 1 create complications that affect the implementation of the pilot?
7. What impact would the dissemination delay or cap have on broker-dealer routing to or trades occurring on alternative trading systems or on electronic trading innovations? Are these impacts different from those experienced by those transacting OTC?
8. Will the dissemination delay or cap create opportunities for market manipulation, and if so, what specific behaviors should either be measured or guarded against?
9. The current assignment of CUSIPs to Test and control groups does not control for the issuer's identity. If CUSIPs are not normally distributed by issuer across control and a particular Test Group or across Test Groups, will there be difficulty interpreting the empirical results? If so, how?
10. Would assignment of an issuer to a particular Test Group change competition between issuers? If so, how?
11. What will the impact on competition be between issuers when some issuers' bonds are in the Test Groups versus the control group?

12. Will the dissemination delay or cap have an impact on competition among dealers? Are dealers who trade larger blocks sizes likely to benefit at the expense of dealers who do not make such trades? If so, how will the dealer network be affected?
13. Will the dissemination delay discourage institutional investors who do not trade larger block sizes from trading with those dealers who do trade larger block sizes? Alternatively, will the dissemination delay encourage institutional investors who do trade larger block sizes to selectively trade with those dealers who do not trade larger block sizes?

Comments on Alternatives to Consider

1. Should FINRA consider other potential designs, for example, as described in the Harris Letter? If so, what designs should be considered and how do they improve over the design described here?
2. Should FINRA consider an alternate reporting design for the dissemination delay test group whereby brokers could report capped trades up to 48 hours after transaction and FINRA would disseminate the trade report when received? Under what conditions would brokers report capped trades earlier than the maximum delay permitted under the pilot? What are the costs and benefits associated with this approach?
3. Should FINRA consider an alternate design that would study, in place of delayed dissemination, suppression of the buy/sell indicator for block-size trades in corporate bonds? As noted above, FINRA currently disseminates this indicator, among other information, for corporate bond trades. However, for trades in Asset-Backed Securities (ABS), FINRA suppresses the buy/sell indicator (and information about contra party type) to balance concerns about transparency and liquidity in the ABS market, which is generally smaller and more institutional than the corporate bond market. What are the costs and benefits associated with an alternative approach that would study ABS-like dissemination protocols for block-size trades in corporate bonds?
4. Can the goals of the pilot be achieved through other means, such as study of currently available data or supplemented with other specific data requests?
5. As discussed above, certain baseline data suggests that block-size trades in IG bonds have not become more difficult to execute. Does the current data support an alternative approach that would limit the study of delayed dissemination to non-IG bonds? What are the costs and benefits associated with such an alternative approach?

Endnotes

1. Persons submitting comments are cautioned that FINRA does not redact or edit personal identifying information, such as names or email addresses, from comment submissions. Persons should submit only information that they wish to make publicly available. *See Notice to Members 03-73* (November 2003) (NASD Announces Online Availability of Comments) for more information.
2. *See Section 19 of the Securities Exchange Act of 1934 (SEA) and rules thereunder.* After a proposed rule change is filed with the SEC, the proposed rule change generally is published for public comment in the *Federal Register*. Certain limited types of proposed rule changes, however, take effect upon filing with the SEC. *See SEA Section 19(b)(3)* and *SEA Rule 19b-4*.
3. *See Securities Exchange Act Release No. 43873 (January 23, 2001), 66 FR 8131 (January 29, 2001) (Order Approving File No. SR-NASD-99-65) (citing a speech by SEC Chairman Levitt, September 9, 1998, at Media Studies Center, New York, NY).*
4. *See NASD Press Release: NASD Launches TRACE Bond Trade Data System (July 1, 2002).*
5. *See Notice to Members 01-18 (March 2001).*
6. *See Notice to Members 03-12 (February 2003).*
7. *See Notice to Members 06-01 (January 2006) (describing the categories of non-IG trades that were subject to delayed dissemination, specifically, newly issued securities rated BBB or lower, and non-IG transactions greater than \$1 million).*
8. *See id.*
9. *See Regulatory Notice 13-35 (October 2013).*
10. *See FINRA Office of the Chief Economist Research Note: Analysis of Corporate Bond Liquidity (2015).*
11. *See FINRA catalogue of TRACE Independent Academic Studies, available at www.finra.org/industry/trace/trace-independent-academic-studies.*
12. *See Securities Exchange Act Release No. 81958 (October 26, 2017), 82 FR 50460 (October 31, 2017) (Notice of Federal Advisory Committee Establishment for the Fixed Income Market Structure Advisory Committee).*
13. *See SEC Press Release 2017-209, SEC Announces the Formation and First Members of Fixed Income Market Structure Advisory Committee (November 9, 2017), available at www.sec.gov/news/press-release/2017-209; see also Opening Remarks of Chairman Jay Clayton at the Inaugural Meeting of the Fixed Income Market Structure Advisory Committee (January 11, 2018), available at www.sec.gov/news/public-statement/opening-remarks-inaugural-meeting-fixed-income-market-structure-advisory (emphasizing the “long term interests of retail investors”).*
14. *See Transcript of FIMSAC Meeting (January 11, 2018), available at www.sec.gov/spotlight/fixed-income-advisory-committee/fimsa-011118-transcript.txt.*
15. *See Recommendation for a Pilot Program to Study the Market Implications of Changing the Reporting Regime for Block-Size Trades in Corporate Bonds (April 9, 2018), available at www.sec.gov/spotlight/fixed-income-advisory-committee/fimsac-block-trade-recommendation.pdf (“FIMSAC Recommendation”).*
16. Rule 6710 generally defines a “TRACE-Eligible Security” as: (1) a debt security that is U.S. dollar-denominated and issued by a U.S. or foreign private issuer (and, if a “restricted security” as defined in Securities Act Rule 144(a)(3), sold pursuant to Securities Act Rule 144A); or (2) a debt security that is U.S. dollar-denominated and issued or guaranteed by an “Agency” as defined in Rule 6710(k) or a “Government-Sponsored Enterprise” as defined in Rule 6710(n).
17. Rule 6730 (Transaction Reporting) describes members’ TRACE reporting obligations.

18. See Rule 6750 (Dissemination of Transaction Information).
19. See, e.g., Securities Exchange Act Release No. 71607 (February 24, 2014), 79 FR 11481 (February 28, 2014) (Order Approving File No. SR-FINRA-2013-046) at 11483 n. 30 (describing the IG and non-IG dissemination caps). FINRA notes that bonds without ratings are generally treated as non-IG for current TRACE dissemination purposes. See Rule 6710(i) (stating that "if a TRACE-Eligible Security is unrated, FINRA may classify the TRACE-Eligible Security as a Non-Investment Grade security").
20. See *Regulatory Notice 17-23* (July 2017).
21. See Transcript of FIMSAC Meeting (April 9, 2018), available at www.sec.gov/spotlight/fixed-income-advisory-committee/fimsa-040918transcript.txt ("April 9th FIMSAC Transcript").
22. The FIMSAC Transparency Subcommittee's preliminary recommendation proposed to increase the dissemination cap for non-IG corporate bonds from \$1 million to \$3 million; during discussion at the FIMSAC meeting, the recommended new dissemination cap for non-IG corporate bonds was increased from \$3 million to \$5 million.
23. This document refers generally to a 48-hour dissemination delay for shorthand. However, as the FIMSAC Recommendation noted, the dissemination delay is at least 48 hours, because trades reported after normal TRACE hours will be disseminated more than 48 hours after execution time. In addition, FINRA believes the FIMSAC Recommendation intended that the 48-hour delay would not include any hours from days on which TRACE was not open, such as weekends and holidays.
24. See April 9th FIMSAC Transcript at pg. 13-14 (opening remarks of Brett Redfearn, Director, Division of Trading and Markets).
25. See *id.* at pg. 25.
26. See *id.* at pg. 38-41.
27. See *id.* at pg. 43-46.
28. See *id.* at pg. 32-35.
29. See *id.* at pg. 50-55.
30. See *id.* at pg. 76-78.
31. See *id.* at pg. 64.
32. See Letter from Kenneth E. Bentsen, Jr., President & CEO, Securities Industry and Financial Markets Association, to Chairman Jay Clayton, SEC, and Robert Cook, President & CEO, FINRA (July 6, 2018) ("SIFMA Letter"); Letter from Matt Berger, Global Head of Fixed Income and Commodities, Jane Street Capital, LLC, to Brent J. Fields, Federal Advisory Committee Management Officer and Secretary, SEC (May 16, 2018) ("Jane Street Letter"); Letter from Wouter Buitenhuis, Flow Traders U.S. LLC, to Federal Advisory Committee Management Officer and Secretary, SEC (July 5, 2018) ("Flow Traders Letter"); Letter from Gregory Davis, Chief Investment Officer, Vanguard, to Brent Fields, Secretary, SEC (January 2, 2019) ("Vanguard Letter"); Letter from Larry Harris, Fred V. Keenan Chair in Finance, USC Marshall School of Business, Kumar Venkataraman, James M. Collins Chair in Finance, Southern Methodist University, and Elisse Walter, Former Chairman, SEC, to Brent J. Fields, Federal Advisory Committee Management Officer and Secretary, SEC (August 21, 2018) ("Harris Letter"); Letter from Michael O'Brien, Head of Global Income Trading, Eaton Vance Management, to Brent J. Fields, Federal Advisory Committee Management Officer and Secretary, SEC, and Robert Cook, President & CEO, FINRA (September 24, 2018) ("Eaton Vance Letter"); Letter from Sandra E O'Connor, Chief Regulatory Affairs Officer, JPMorgan Chase & Co., to SEC and FINRA (June 29, 2018) ("JPMorgan Chase Letter"); Letter from Cathy Scott, Director, Fixed Income Forum on behalf of The Credit Roundtable, to Brent Fields, Secretary, SEC, and SEC Complaint Center (November 27, 2018) ("Credit Roundtable Letter"); and Letter from Jed Stevenson, Senior Managing Director, Wellington Management Company LLP, to Brent J. Fields, Federal Advisory Committee Management Officer and Secretary, SEC, and Robert Cook, President & CEO, FINRA (February 4, 2019) ("Wellington Management Letter"). These comments were submitted to the FIMSAC comment file (File No. 265-30), available at www.sec.gov/comments/265-30/265-30.htm.

33. See SIFMA Letter at 2.
34. See JPMorgan Chase Letter at 3. Wellington Management offered a similar observation, stating that “[o]ur experience in trading both investment grade and high yield bonds suggests that the immediate [TRACE] dissemination could result in broker-dealers preferring smaller trade sizes.” See Wellington Management Letter at 1.
35. See Eaton Vance Letter at 2.
36. See Harris Letter at 2-3.
37. See Harris Letter at 5.
38. See JPMorgan Chase Letter at 3.
39. See SIFMA Letter at 2.
40. See Eaton Vance Letter at 2. Similarly, Wellington Management stated its expectation that the pilot “will allow for improved market liquidity, as broker-dealers will have 48 hours to find purchasers who are willing to purchase the subject securities at prices that are not artificially reduced by the expectation of an eager seller.” See Wellington Management Letter at 2.
41. See Harris Letter at 4.
42. See *id.* at 2.
43. See Harris Letter at 3.
44. See The Credit Roundtable Letter at 2. Although The Credit Roundtable opposed the 48-hour dissemination delay proposed in the FIMSAC Recommendation, it supported the Recommendation’s proposal to increase the IG dissemination cap from \$5 million to \$10 million and the non-IG dissemination cap from \$1 million to \$5 million. See The Credit Roundtable Letter at 1.
45. See Vanguard Letter at 2.
46. See *id.*
47. See Jane Street Letter at 2-3.
48. Jane Street further stated that the information asymmetry that would be created by the FIMSAC Recommendation would make market participants less willing to provide liquidity on “all-to-all” trading platforms, stifling the growth of such trading platforms. See Jane Street Letter at 2.
49. See Flow Traders Letter at 3-4.
50. See Vanguard Letter at 2.
51. See JPMorgan Chase Letter at 4-6.
52. See Harris Letter at 4.
53. See Vanguard Letter at 3.
54. See Securities Exchange Act Release No. 84875 (December 19, 2018), 84 FR 5202, 5215 (February 20, 2019) (Transaction Fee Pilot Adopting Release).
55. The manner in which bonds are stratified by 144A type in this proposed pilot is consistent with the peer reviewed academic literature (Bessembinder, Jacobsen, Maxwell and Venkataraman 2018).
56. See April 9th FIMSAC Transcript at pg. 30-31 (expressing concern about picking “winners and losers, both in terms of issuers, in terms bonds owned by asset managers, bonds owned by individuals and bonds owned on dealer balance sheets”).
57. FINRA notes that the comparison between Test Group 1 and 3 involves two changes because the delayed dissemination in Test Group 3 would occur at a higher trade size threshold and Test Group 3 includes an increase in the dissemination cap. An alternative construction considered for Test Group 1 is discussed below.
58. Liquidity is the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset’s price.
59. See Transaction Fee Pilot Adopting Release, 84 FR at 5244.
60. See *id.* at 5259.
61. See *id.* at 5266.
62. Bessembinder, Maxwell and Venkataraman (2006), Edwards, Harris and Piwowar (2007) and Goldstein, Hotchkiss and Sirri (2007) found that TRACE reduced transaction costs for investors. The latter two papers also found the reduction in cost is greater for smaller size trades. Jacobsen and Venkataraman (2018) found reduced trading cost in 144A corporate bonds. On the other hand, Goldstein, Hotchkiss and Sirri (2007) found that the reduction in bid-ask spread was limited to certain type of bonds and less frequently traded bonds and very large trades showed no significant reduction in bid-ask spread.

63. See Goldstein and Hotchkiss (2007) and Asquith, Covert and Pathak (2013).
64. Goldstein, Hotchkiss and Sirri (2007) and Asquith, Covert and Pathak (2013) did not find that TRACE increased trading activity. Indeed, Asquith, Covert and Pathak (2013) found that TRACE reduced trading activity for high-yield (*i.e.*, non-IG) bonds. Bessembinder and Maxwell (2008) offered a possible explanation of the reduced trading activity in the dealer market. The paper noted the dramatic increase in corporate bond trading volume on the electronic platform that followed the introduction of TRACE and that TRACE might have improved the viability of the electronic market. Bessembinder and Maxwell (2008) noted that while investors had benefited from the increased transparency through reduced trading cost, bond dealers had experienced reductions in employment and compensation. Market participants found it more difficult to trade large size orders as dealers were reluctant to carry inventory.
65. Bessembinder, Maxwell and Venkataraman (2006) found the concentration ratio of trades completed by the largest 12 dealers decreased. Jacobsen and Venkataraman (2018) found small dealers gained market share and closed the trading cost advantage enjoyed by large dealers. Similar effects also have been observed in other markets. For example, Schultz and Song (2017) found trading costs fell for institutional investors and less active dealers received better prices in their trades with more active dealers in the To Be Announced mortgage-backed securities market.
66. Cici, Gibson and Merrick (2011) found that TRACE contributed to the general decline in the valuation dispersion of bonds across mutual funds.
67. For the purposes of the economic baseline, consistent with Rule 6710, IG includes bonds in the four highest generic rating categories (AAA, AA, A, BBB). Non-IG includes bonds rated in lower credit categories (BB, B, CCC, CC, C, C, NA/NR).
68. The trend of block size trades are similar across issue sizes. Larger issue sizes attract more block trades. The graphs are available upon request.