SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-83681; File No. SR-BX-2018-025)

July 20, 2018

Self-Regulatory Organizations; Nasdaq BX, Inc.; Notice of Filing of Proposed Rule Change to Make Permanent the Pilot Program for the Exchange's Retail Price Improvement Program

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"),[1] and Rule

19b-4 thereunder,[2] notice is hereby given that on July 9, 2018, Nasdaq BX, Inc. ("BX" or

"Exchange") filed with the Securities and Exchange Commission ("SEC" or "Commission") the

proposed rule change as described in Items I, II, and III below, which Items have been prepared

by the Exchange. The Commission is publishing this notice to solicit comments on the proposed

rule change from interested persons.

I.   Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed
        Rule Change

The Exchange proposes to a proposal to make permanent the pilot program for the

Exchange's Retail Price Improvement ("RPI") Program (the "Program"), which is set to expire

the earlier of approval of the filing to make this rule permanent or December 31, 2018.

The text of the proposed rule change is available on the Exchange's Website at

http://nasdaqbx.cchwallstreet.com/, at the principal office of the Exchange, and at the

Commission's Public Reference Room.

II.   Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the
        Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the

purpose of and basis for the proposed rule change and discussed any comments it received on the

proposed rule change. The text of these statements may be examined at the places specified in

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[1]   15 U.S.C. 78s(b)(1).

[2]   17 CFR 240.19b-4.

Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below,

of the most significant aspects of such statements.

A.   Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis
      for, the Proposed Rule Change

1.   Purpose

The Exchange proposes to make permanent the Exchange's pilot RPI Program,[3] currently

scheduled to expire the earlier of approval of the filing to make this rule permanent or December

31, 2018.

Background

In November 2014, the Commission approved the RPI Program on a pilot basis.[4] The

Program is designed to attract retail order flow to the Exchange, and allow such order flow to

receive potential price improvement. The Program is currently limited to trades occurring at

prices equal to or greater than $1.00 per share. Under the Program, a class of market participant

called a Retail Member Organization ("RMO") is eligible to submit certain retail order flow

("Retail Orders")[5] to the Exchange. BX members ("Members") are permitted to provide

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[3]   Securities Exchange Act Release No. 73702 (November 28, 2014), 79 FR 72049
      (December 4, 2014) (SR-BX-2014-048) ("RPI Approval Order").

[4]   See id.

[5]   A "Retail Order" is defined in BX Rule 4780(a)(2) by referencing BX Rule 4702, and BX
      Rule 4702(b)(6) says it is an order type with a non-display order attribute submitted to
      the Exchange by a RMO. A Retail Order must be an agency order, or riskless principal
      order that satisfies the criteria of FINRA Rule 5320.03. The Retail Order must reflect
      trading interest of a natural person with no change made to the terms of the underlying
      order of the natural person with respect to price (except in the case of a market order that
      is changed to a marketable limit order) or side of market and that does not originate from
      a trading algorithm or any other computerized methodology.

potential price improvement for Retail Orders in the form of non-displayed interest that is priced

more aggressively than the Protected National Best Bid or Offer ("Protected NBBO").[6]

The Program was approved by the Commission on a pilot basis running one-year from

the date of implementation.[7] The Commission approved the Program on November 28, 2014.[8]

The Exchange implemented the Program on December 1, 2014 and the pilot has since been

extended for a one-year period twice, as well as for a six-month period, with it now scheduled to

expire the earlier of approval of the filing to make this rule permanent or December 31, 2018.[9]

Specifically, BX Rule 4780(h) will be amended to delete that the Program is a pilot and

that is scheduled to expire the earlier of approval of the filing to make this rule permanent or

December 31, 2018. BX Rule 4780(h) will continue to say that the Program will be limited to

securities whose Bid Price on the Exchange is greater than or equal to $1.00 per share.

The SEC approved the Program pilot, in part, because it concluded, "the Program is

reasonably designed to benefit retail investors by providing price improvement to retail order

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[6]   The term Protected Quotation is defined in Chapter XII, Sec. 1(19) and has the same
       meaning as is set forth in Regulation NMS Rule 600(b)(58). The Protected NBBO is the
       best-priced protected bid and offer. Generally, the Protected NBBO and the national best
       bid and offer ("NBBO") will be the same. However, a market center is not required to
       route to the NBBO if that market center is subject to an exception under Regulation NMS
       Rule 611(b)(1) or if such NBBO is otherwise not available for an automatic execution. In
       such case, the Protected NBBO would be the best-priced protected bid or offer to which a
   market center must route interest pursuant to Regulation NMS Rule 611.

[7]   See RPI Approval Order, supra note 3 at 72053.

[8]   Id. at 72049.

[9]   See Securities Exchange Act Release No. 76490 (November 20, 2015), 80 FR 74165
       (November 27, 2015) (SR-BX-2015-073); Securities Exchange Act Release No. 79446
       (December 1, 2016), 81 FR 88290 (December 7, 2016) (SR-BX-2016-065); Securities
       Exchange Act Release No. 82192 (December 1, 2017), 82 FR 57809 (December 7, 2017)
       (SR-BX-2017-055); and Securities Exchange Act Release No. 83539 (June 28, 2018), 83
       FR 31203 (July 3, 2018) (SR-BX-2018-026).

flow."[10] The Commission also found that "while the Program would treat retail order flow

differently from order flow submitted by other market participants, such segmentation would not

be inconsistent with Section 6(b)(5) of the Act, which requires that the rules of an exchange are

not designed to permit unfair discrimination."[11] As the SEC acknowledged, the retail order

segmentation was designed to create greater retail order flow competition and thereby increase

the amount of this flow to transparent and well-regulated exchanges. This would help to ensure

that retail investors benefit from competitive price improvement that exchange-based liquidity

providers provide.

As discussed below, the Exchange believes that the Program data supports the conclusion

that it provides valuable price improvement, more than $4 million since inception, to retail

investors that they may not otherwise receive and that it is therefore appropriate to make the pilot

Program permanent.

BX RPI - Monthly and Cumulative Price Improvement

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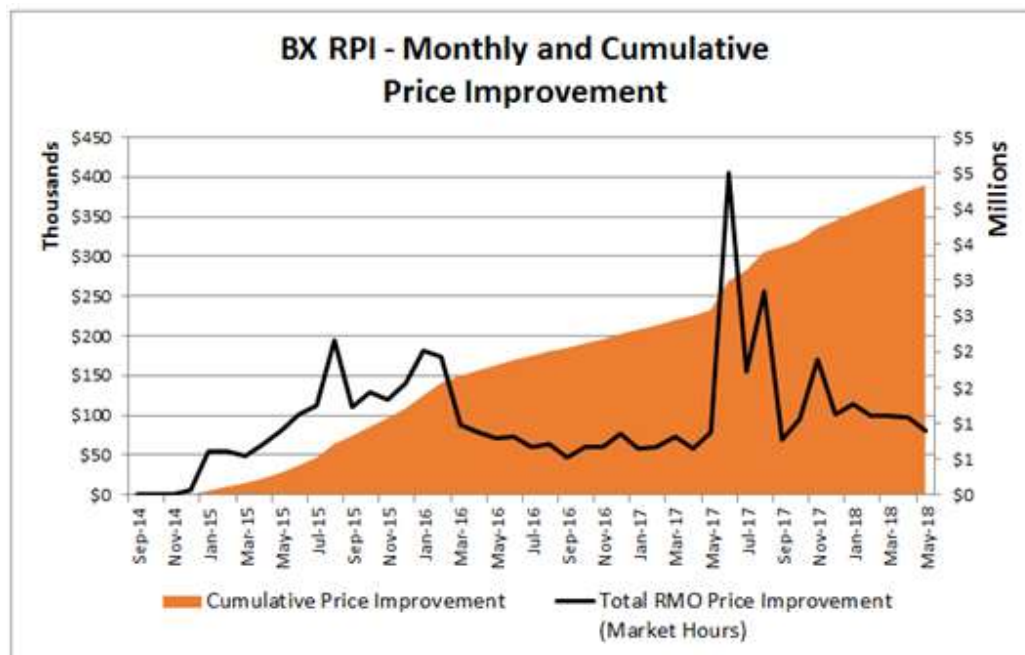
[10]   See RPI Approval Order, supra note 3 at 72051.

[11]   Id.

<u>Definitions</u>

The Exchange adopted the following definitions under BX Rule 4780. First, the term "Retail Member Organization" (or "RMO") is defined as a Member (or a division thereof) that has been approved by the Exchange to submit Retail Orders.

Second, the term "Retail Order" is defined by BX Rule 4702(b)(6)(A) as an order type with a non-display order attribute submitted to the Exchange by a RMO. A Retail Order must be an agency Order, or riskless principal Order that satisfies the criteria of FINRA Rule 5320.03. The Retail Order must reflect trading interest of a natural person with no change made to the terms of the underlying order of the natural person with respect to price (except in the case of a market order that is changed to a marketable limit order) or side of market and that does not originate from a trading algorithm or any other computerized methodology.[12]

The criteria set forth in FINRA Rule 5320.03 adds additional precision to the definition of "Retail Order" by clarifying that an RMO may enter Retail Orders on a riskless principal basis, provided that (i) the entry of such riskless principal orders meet the requirements of FINRA Rule 5320.03, including that the RMO maintains supervisory systems to reconstruct, in a time- sequenced manner, all Retail Orders that are entered on a riskless principal basis; and (ii) the RMO submits a report, contemporaneously with the execution of the facilitated order, that identifies the trade as riskless principal.

The term "Retail Price Improving Order" or "RPI Order" or collectively "RPI interest" is defined as an Order Type with a Non- Display Order Attribute that is held on the Exchange Book in order to provide liquidity at a price at least $0.001 better than the NBBO through a special execution process described in Rule 4780. A RPI Order may be entered in price increments of

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[12]   See <u>supra</u> note 5.

$0.001. An RPI Order will be posted to the Exchange Book regardless of its price, but an RPI

Order may execute only against a Retail Order, and only if its price is at least $0.001 better than

the NBBO.[13] RPI orders can be priced either as an explicitly priced limit order or implicitly

priced as relative to the NBBO with an offset of at least $0.001.

The price of an RPI Order with an offset is determined by a Member's entry of the

following into the Exchange: (1) RPI buy or sell interest; (2) an offset from the Protected NBBO,

if any; and (3) a ceiling or floor price. RPI Orders submitted with an offset are similar to other

peg orders available to Members in that the order is tied or "pegged" to a certain price, and

would have its price automatically set and adjusted upon changes in the Protected NBBO, both

upon entry and any time thereafter. RPI sell or buy interest typically are entered to track the

Protected NBBO, that is, RPI Orders typically are submitted with an offset. The offset is a

predetermined amount by which the Member is willing to improve the Protected NBBO, subject

to a ceiling or floor price. The ceiling or floor price is the amount above or below which the

Member does not wish to trade. RPI Orders in their entirety (the buy or sell interest, the offset,

and the ceiling or floor) will remain non-displayed. The Exchange also allows Members to enter

RPI Orders that establish the exact limit price, which is similar to a non-displayed limit order

currently accepted by the Exchange except the Exchange accepts sub-penny limit prices on RPI

Orders in increments of $0.001. The Exchange monitors whether RPI buy or sell interest,

adjusted by any offset and subject to the ceiling or floor price, is eligible to interact with

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[13] Exchange systems prevent Retail Orders from interacting with RPI Orders if the RPI
Order is not priced at least $0.001 better than the Protected NBBO. The Exchange notes,
however, that price improvement of $0.001 would be a minimum requirement and
Members can enter RPI Orders that better the Protected NBBO by more than $0.001.
Exchange systems accept RPI Orders without a minimum price improvement value;
however, such interest execute at its floor or ceiling price only if such floor or ceiling
price is better than the Protected NBBO by $0.001 or more.

incoming Retail Orders.

Members and RMOs may enter odd lots, round lots or mixed lots as RPI Orders and as Retail Orders respectively. As discussed below, RPI Orders are ranked and allocated according to price and time of entry into the System consistent with BX Rule 4757 and therefore without regard to whether the size entered is an odd lot, round lot or mixed lot amount. Similarly, Retail Orders interact with RPI Orders and other price-improving orders available on the Exchange (*e.g.*, non-displayed liquidity priced more aggressively than the NBBO)[14] according to the Priority and Allocation rules of the Program and without regard to whether they are odd lots, round lots or mixed lots. Finally, Retail Orders are designated as Type 1 or Type 2 without regard to the size of the order.

RPI Orders interact with Retail Orders as follows. Assume a Member enters RPI sell interest with an offset of $0.001 and a floor of $10.10 while the Protected NBO is $10.11. The RPI Order could interact with an incoming buy Retail Order at $10.109. If, however, the Protected NBO was $10.10, the RPI Order could not interact with the Retail Order because the price required to deliver the minimum $0.001 price improvement ($10.099) would violate the Member's floor of $10.10. If a Member otherwise enters an offset greater than the minimum required price improvement and the offset would produce a price that would violate the Member's floor, the offset would be applied only to the extent that it respects the Member's floor. By way of illustration, assume RPI buy interest is entered with an offset of $0.005 and a

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14   Other price improving liquidity may include, but is not limited to: booked non-displayed orders with a limit price that is more aggressive than the then-current NBBO; midpoint-pegged orders (which are by definition non-displayed and priced more aggressively than the NBBO); non-displayed orders pegged to the NBBO with an aggressive offset, as defined in BX Rule 4780(a)(4) as Other Price Improving Contra-Side Interest. Orders that do not constitute other price improving liquidity include, but are not limited to: orders with a time-in-force instruction of IOC; displayed orders; limit orders priced less aggressively than the NBBO.

ceiling of $10.112 while the Protected NBBO is at $10.11. The RPI Order could interact with an incoming sell Retail Order at $10.112, because it would produce the required price improvement without violating the Member's ceiling, but it could not interact above the $10.112 ceiling. Finally, if a Member enters an RPI Order without an offset (*i.e.*, an explicitly priced limit order), the RPI Order will interact with Retail Orders at the level of the Member's limit price as long as the minimum required price improvement is produced. Accordingly, if RPI sell interest is entered with a limit price of $10.098 and no offset while the Protected NBBO is $10.11, the RPI Order could interact with the Retail Order at $10.098, producing $0.012 of price improvement. The System will not cancel RPI interest when it is not eligible to interact with incoming Retail Orders; such RPI interest will remain in the System and may become eligible again to interact with Retail Orders depending on the Protected NBBO. RPI Orders are not accepted during halts.

RMO Qualifications and Approval Process

Under BX Rule 4780(b), any Member may qualify as an RMO if it conducts a retail business or routes retail orders on behalf of another broker-dealer. For purposes of BX Rule 4780, conducting a retail business shall include carrying retail customer accounts on a fully disclosed basis. Any Member that wishes to obtain RMO status is required to submit: (i) an application form; (ii) supporting documentation sufficient to demonstrate the retail nature and characteristics of the applicant's order flow[15] and (iii) an attestation, in a form prescribed by the Exchange, that substantially all orders submitted by the Member as a Retail Order would meet the qualifications for such orders under proposed BX Rule 4780(b). The Exchange shall notify

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[15]   For example, a prospective RMO could be required to provide sample marketing literature, website screenshots, other publicly disclosed materials describing the retail nature of their order flow, and such other documentation and information as the Exchange may require to obtain reasonable assurance that the applicant's order flow would meet the requirements of the Retail Order definition.

the applicant of its decision in writing.

An RMO is required to have written policies and procedures reasonably designed to assure that it will only designate orders as Retail Orders if all requirements of a Retail Order are met. Such written policies and procedures must require the Member to (i) exercise due diligence before entering a Retail Order to assure that entry as a Retail Order is in compliance with the requirements of this rule, and (ii) monitor whether orders entered as Retail Orders meet the applicable requirements. If the RMO represents Retail Orders from another broker-dealer customer, the RMO's supervisory procedures must be reasonably designed to assure that the orders it receives from such broker-dealer customer that it designates as Retail Orders meet the definition of a Retail Order. The RMO must (i) obtain an annual written representation, in a form acceptable to the Exchange, from each broker-dealer customer that sends it orders to be designated as Retail Orders that entry of such orders as Retail Orders will be in compliance with the requirements of this rule, and (ii) monitor whether its broker-dealer customers' Retail Order flow continues to meet the applicable requirements.[16]

If the Exchange disapproves the application, the Exchange provides a written notice to the Member. The disapproved applicant could appeal the disapproval by the Exchange as provided in proposed BX Rule 4780(d), and/or reapply for RMO status 90 days after the disapproval notice is issued by the Exchange. An RMO also could voluntarily withdraw from such status at any time by giving written notice to the Exchange.

Failure of RMO to Abide by Retail Order Requirements

BX Rule 4780(c) addresses an RMO's failure to abide by Retail Order requirements. If

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[16]   The Exchange or another self-regulatory organization on behalf of the Exchange will review an RMO's compliance with these requirements through an exam based review of the RMO's internal controls.

an RMO designates orders submitted to the Exchange as Retail Orders and the Exchange

determines, in its sole discretion, that those orders fail to meet any of the requirements of Retail

Orders, the Exchange may disqualify a Member from its status as an RMO. When

disqualification determinations are made, the Exchange provides a written disqualification notice

to the Member. A disqualified RMO may appeal the disqualification as provided in proposed

BX Rule 4780(d) and/or reapply for RMO status 90 days after the disqualification notice is

issued by the Exchange.

Appeal of Disapproval or Disqualification

BX Rule 4780(d) provides appeal rights to Members. If a Member disputes the

Exchange's decision to disapprove it as an RMO under BX Rule 4780(b) or disqualify it under

BX Rule 4780(c), such Member ("appellant") may request, within five business days after notice

of the decision is issued by the Exchange, that the Retail Price Improvement Program Panel

("RPI Panel") review the decision to determine if it was correct.

The RPI Panel consists of the Exchange's Chief Regulatory Officer ("CRO"), or a

designee of the CRO, and two officers of the Exchange designated by the Chief Executive

Officer of BX. The RPI Panel reviews the facts and render a decision within the time frame

prescribed by the Exchange. The RPI Panel may overturn or modify an action taken by the

Exchange and all determinations by the RPI Panel constitute final action by the Exchange on the

matter at issue.

Retail Liquidity Identifier

Under BX Rule 4780(e), the Exchange disseminates an identifier when RPI interest

priced at least $0.001 better than the Exchange's Protected Bid or Protected Offer for a particular

security is available in the System ("Retail Liquidity Identifier"). The Retail Liquidity Identifier

is disseminated through consolidated data streams (*i.e.*, pursuant to the Consolidated Tape Association Plan/Consolidated Quotation System, or CTA/CQS, for Tape A and Tape B securities, and the Nasdaq UTP Plan for Tape C securities) as well as through proprietary Exchange data feeds.[17] The Retail Liquidity Identifier reflects the symbol and the side (buy or sell) of the RPI interest, but does not include the price or size of the RPI interest. In particular, CQS and UTP quoting outputs include a field for codes related to the Retail Liquidity Identifier. The codes indicate RPI interest that is priced better than the Exchange's Protected Bid or Protected Offer by at least the minimum level of price improvement as required by the Program.

Retail Order Designations

Under BX Rule 4780(f), an RMO can designate how a Retail Order interacts with available contra-side interest as provided in Rule 4702.

A Type 1-designated Retail Order will attempt to execute against RPI Orders and any other orders on the Exchange Book with a price that is (i) equal to or better than the price of the Type-1 Retail Order and (ii) at least $0.001 better than the NBBO. A Type-1 Retail Order is not routable and will thereafter be cancelled.

A Type 2-designated Retail Order will first attempt to execute against RPI Orders and any other orders on the Exchange Book with a price that is (i) equal to or better than the price of the Type-2 Retail Order and (ii) at least $0.001 better than the NBBO and will then attempt to execute against any other order on the Exchange Book with a price that is equal to or better than the price of the Type-2 Retail Order, unless such executions would trade through a Protected

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[17]   The Exchange notes that the Retail Liquidity Identifier for Tape A and Tape B securities are disseminated pursuant to the CTA/CQS Plan. The identifier is also available through the consolidated public market data stream for Tape C securities. The processor for the Nasdaq UTP quotation stream disseminates the Retail Liquidity Identifier and analogous identifiers from other market centers that operate programs similar to the RPI Program.

Quotation. A Type-2 Retail Order may be designated as routable.

Priority and Order Allocation

Under BX Rule 4780(g), competing RPI Orders in the same security are ranked and allocated according to price then time of entry into the System. Executions occur in price/time priority in accordance with BX Rule 4757. Any remaining unexecuted RPI interest remain available to interact with other incoming Retail Orders if such interest is at an eligible price. Any remaining unexecuted portion of the Retail Order will cancel or execute in accordance with BX Rule 4780(f). The following example illustrates this method:

Protected NBBO for security ABC is $10.00 — $10.05
Member 1 enters an RPI Order to buy ABC at $10.015 for 500
Member 2 then enters an RPI Order to buy ABC at $10.02 for 500
Member 3 then enters an RPI Order to buy ABC at $10.035 for 500

An incoming Retail Order to sell 1,000 shares of ABC for $10.00 executes first against Member 3's bid for 500 at $10.035, because it is the best priced bid, then against Member 2's bid for 500 at $10.02, because it is the next best priced bid. Member 1 is not filled because the entire size of the Retail Order to sell 1,000 is depleted. The Retail Order executes against RPI Orders in price/time priority.

However, assume the same facts above, except that Member 2's RPI Order to buy ABC at $10.02 is for 100. The incoming Retail Order to sell 1,000 executes first against Member 3's bid for 500 at $10.035, because it is the best priced bid, then against Member 2's bid for 100 at $10.02, because it is the next best priced bid. Member 1 then receives an execution for 400 of its bid for 500 at $10.015, at which point the entire size of the Retail Order to sell 1,000 is depleted.

As a final example, assume the same facts as above, except that Member 3's order was not an RPI Order to buy ABC at $10.035, but rather, a non-displayed order to buy ABC at $10.03. The result would be similar to the result immediately above, in that the incoming Retail

Order to sell 1,000 executes first against Member 3's bid for 500 at $10.03, because it is the best priced bid, then against Member 2's bid for 100 at $10.02, because it is the next best priced bid. Member 1 then receives an execution for 400 of its bid for 500 at $10.015, at which point the entire size of the Retail Order to sell 1,000 is depleted.

All Regulation NMS securities traded on the Exchange are eligible for inclusion in the RPI Program. The Exchange limits the Program to trades occurring at prices equal to or greater than $1.00 per share. Toward that end, Exchange trade validation systems prevent the interaction of RPI buy or sell interest (adjusted by any offset) and Retail Orders at a price below $1.00 per share.[18] For example, if there is RPI buy interest tracking the Protected NBB at $0.99 with an offset of $0.001 and a ceiling of $1.02, Exchange trade validation systems would prevent the execution of the RPI Order at $0.991 with a sell Retail Order with a limit of $0.99. However, if the Retail Order was Type 2 as defined the Program,[19] it would be able to interact at $0.99 with liquidity outside the Program in the Exchange's order book. In addition to facilitating an orderly[20] and operationally intuitive program, the Exchange believes that limiting the Program to trades equal to or greater than $1.00 per share enabled it better to focus its efforts to monitor

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[18]   As discussed above, the price of an RPI is determined by a Member's entry of buy or sell interest, an offset (if any) and a ceiling or floor price. RPI sell or buy interest typically tracks the Protected NBBO.

[19]   Type 2 Retail Orders are treated as IOC orders that execute against displayed and non-displayed liquidity in the Exchange's order book where there is no available liquidity in the Program. Type 2 Retail Orders can either be designated as eligible for routing or as non-routable, as described above.

[20]   Given the proposed limitation, the Program would have no impact on the minimum pricing increment for orders priced less than $1.00 and therefore no effect on the potential of markets executing those orders to lock or cross. In addition, the non-displayed nature of the liquidity in the Program simply has no potential to disrupt displayed, protected quotes. In any event, the Program would do nothing to change the obligation of exchanges to avoid and reconcile locked and crossed markets under NMS Rule 610(d).

price competition and to assess any indications that data disseminated under the Program is potentially disadvantaging retail orders. As part of that review, the Exchange produced data throughout the pilot, which included statistics about participation, the frequency and level of price improvement provided by the Program, and any effects on the broader market structure.

Rationale for Making the Program Pilot Permanent

The Exchange established the RPI Program in an attempt to attract retail order flow to the Exchange by providing an opportunity price improvement to such order flow. The Exchange believes that the Program promotes transparent competition for retail order flow by allowing Exchange members to submit RPI Orders[21] to interact with Retail Orders. Such competition promotes efficiency by facilitating the price discovery process and generating additional investor interest in trading securities, thereby promoting capital formation and retail investment opportunities. The Program will continue to be limited to trades occurring at prices equal to or greater than $1.00 per share.

The Exchange believes, in accordance with its filing establishing the pilot Program, that BX did "produce data throughout the pilot, which will include statistics about participation, the frequency and level of price improvement provided by the Program, and any effects on the broader market structure."[22] The Exchange has fulfilled this obligation through the reports and assessments it has submitted to the Commission since the implementation of the pilot Program.

The SEC stated in the RPI Approval Order that the Program could promote competition

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[21]   A Retail Price Improvement Order is defined in BX Rule 4780(a)(3) by referencing BX Rule 4702 and BX Rule 4702(b)(5) says that it is as an order type with a non-display order attribute that is held on the Exchange Book in order to provide liquidity at a price at least $0.001 better than the NBBO through a special execution process described in Rule 4780.

[22]   See Securities Exchange Act Release No. 73410 (October 23, 2014), 79 FR 64447 at 64450 (SR-BX-2014-048).

for retail order flow among execution venues, and that this could benefit retail investors by creating additional well-regulated and transparent price improvement opportunities for marketable retail order flow, most of which is currently executed in the Over-the-Counter ("OTC") markets without ever reaching a public exchange.[23] The Exchange believes that it has achieved its goal of attracting retail order flow to BX, and has resulted in a significant price improvement to retail investors through a competitive pricing process. The data demonstrates that the Program has continued to grow over time and the Exchange has not detected any negative impact to market quality The Exchange also has not received any complaints or negative feedback concerning the Program.

As seen in the table below, RMO orders and shares executed have continued to rise since the introduction of the Program in December 2014. RMO executed share volume on BX accounted for 0.05% of total consolidated volume in eligible U.S. listed securities in Q4 2017. Despite its size relative to total consolidated trading, however, the Program has continued to provide considerable price improvement to RMO orders each month with total price improvement during market hours from the start of the Program through May 2018 totaling over $4.3 million.

Retail orders are routed by sophisticated brokers using systems that seek the highest fill rates and amounts of price improvement. These brokers have many choices of execution venues for retail orders. When they choose to route to the Program, they have determined that it is the best opportunity for fill rate and price improvement at that time.

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[23]   RPI Approval Order, 79 FR at 72053.

Month	Total RMO Orders (Market Hours)	RMO Shares Executed (Market Hours)	Total RMO Price Improvement (Market Hours)
Sep-14	0	0	$0
Oct-14	0	0	$0
Nov-14	0	0	$0
Dec-14	4,003	521,587	$6,572
Jan-15	66,903	9,723,791	$55,480
Feb-15	71,204	12,948,664	$54,769
Mar-15	62,216	10,818,042	$49,232
Apr-15	75,558	12,121,577	$63,247
May-15	98,859	16,723,281	$81,268
Jun-15	116,570	20,341,305	$100,520
Jul-15	133,917	22,310,364	$111,657
Aug-15	192,546	30,011,636	$194,706
Sep-15	141,496	23,199,937	$110,415
Oct-15	148,414	25,745,772	$128,838
Nov-15	123,267	20,788,967	$120,037
Dec-15	145,022	24,414,783	$140,444
Jan-16	162,025	30,010,815	$181,781
Feb-16	135,409	27,794,644	$173,988
Mar-16	93,729	17,688,230	$88,900
Apr-16	82,819	15,269,513	$78,241
May-16	70,192	13,336,738	$71,145
Jun-16	76,092	15,356,152	$74,035
Jul-16	65,121	13,532,803	$59,305
Aug-16	78,611	16,412,113	$64,231
Sep-16	84,240	17,368,907	$46,792
Oct-16	146,207	30,827,361	$60,624
Nov-16	103,046	19,744,407	$60,391
Dec-16	168,638	31,003,843	$76,025
Jan-17	140,203	23,474,999	$58,887
Feb-17	139,447	26,643,083	$59,372
Mar-17	161,154	30,595,963	$73,250
Apr-17	126,665	26,587,486	$59,141
May-17	143,927	31,368,371	$78,979
Jun-17	332,266	71,569,426	$405,933
Jul-17	210,309	39,061,892	$155,669
Aug-17	266,762	51,442,492	$255,999
Sep-17	154,846	29,831,646	$69,634
Oct-17	205,399	39,409,251	$95,051
Nov-17	370,064	94,703,209	$169,738
Dec-17	219,528	49,424,240	$102,082

Month	Total RMO Orders (Market Hours)	RMO Shares Executed (Market Hours)	Total RMO Price Improvement (Market Hours)
Jan-18	248,419	47,080,453	$113,956
Feb-18	263,576	40,979,066	$100,148
Mar-18	597,460	40,896,277	$98,779
Apr-18	1,095,396	41,067,806	$97,015
May-18	1,031,527	31,843,167	$81,199
Total	8,353,052	1,193,994,059	$4,327,477

Monthly and Cumulative Price Improvement
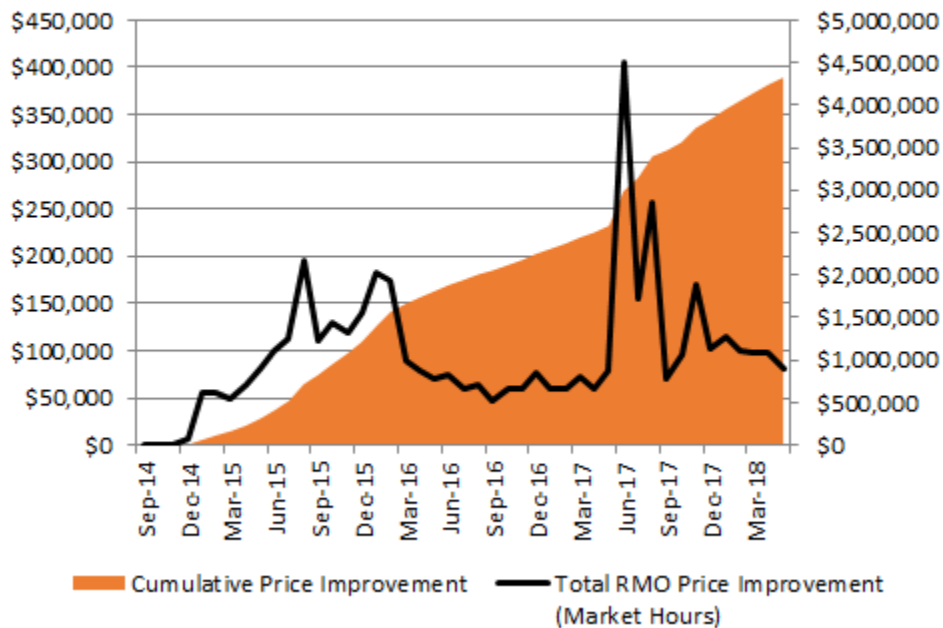
The table below shows that between April 2017 and May 2018, roughly 50% of RMO orders were for 100 shares or less and around 70% of orders were for 300 shares or less. Larger orders of 7,500 shares or more accounted for approximately 2%, ranging from 0.62% to 3.09%. Although large order were a small percentage of total orders, they make up a significant portion of total shares ordered, ranging from 21.11% to 46.22%. Orders of 300 shares or less, which accounted for the vast majority of total RMO orders, accounted for only between 4.81% and 15.38% of total shares ordered.

Distribution of RMO Orders by Order Size									
Month	**<=100**	**101-300**	**301-500**	**501-1,000**	**1,001-2,000**	**2,001-4,000**	**4,001-7,500**	**7,500-15,000**	**>15,000**
Apr-17	49.50%	18.53%	8.67%	9.47%	5.69%	3.84%	2.24%	1.38%	0.69%
May-17	46.55%	23.79%	8.25%	8.42%	5.26%	3.71%	2.12%	1.29%	0.62%
Jun-17	59.60%	13.26%	6.62%	7.91%	4.75%	3.48%	2.36%	1.52%	0.51%
Jul-17	57.30%	14.61%	7.32%	8.50%	5.17%	3.28%	2.00%	1.19%	0.65%
Aug-17	56.38%	15.19%	7.54%	8.49%	5.23%	3.41%	1.91%	1.22%	0.63%
Sep-17	53.16%	16.29%	7.69%	8.79%	5.71%	4.05%	2.22%	1.38%	0.70%
Oct-17	54.28%	16.00%	7.46%	8.65%	5.64%	3.84%	2.15%	1.33%	0.66%
Nov-17	47.76%	15.30%	8.19%	10.23%	7.38%	5.10%	2.95%	2.04%	1.06%
Dec-17	48.66%	15.30%	8.27%	10.34%	6.99%	4.82%	2.79%	1.87%	0.98%
Jan-18	53.60%	14.93%	7.73%	9.20%	5.98%	4.04%	2.28%	1.53%	0.71%
Feb-18	58.44%	14.58%	7.14%	8.02%	4.93%	3.29%	1.91%	1.14%	0.55%
Mar-18	55.29%	17.97%	8.63%	8.38%	5.12%	2.64%	1.07%	0.61%	0.28%
Apr-18	54.52%	19.12%	9.04%	8.31%	5.02%	2.50%	0.87%	0.42%	0.19%
May-18	50.44%	20.21%	9.89%	9.10%	5.77%	2.88%	0.96%	0.50%	0.26%

Distribution of RMO Shares Ordered by Order Size									
Month	**<=100**	**101-300**	**301-500**	**501-1,000**	**1,001-2,000**	**2,001-4,000**	**4,001-7,500**	**7,500-15,000**	**>15,000**
Apr-17	3.04%	4.63%	4.42%	8.78%	10.06%	12.89%	13.89%	16.06%	26.23%
May-17	3.28%	6.49%	4.49%	8.34%	9.98%	13.38%	14.28%	16.05%	23.71%
Jun-17	2.47%	3.78%	3.95%	8.89%	10.15%	13.74%	17.06%	20.07%	19.88%
Jul-17	2.82%	4.20%	4.36%	9.31%	10.78%	12.94%	14.44%	16.47%	24.67%
Aug-17	2.80%	4.28%	4.42%	9.21%	10.84%	13.21%	13.55%	16.63%	25.08%
Sep-17	2.88%	4.16%	3.98%	8.36%	10.50%	14.04%	14.17%	16.78%	25.14%
Oct-17	2.89%	4.31%	4.09%	8.73%	11.02%	14.04%	14.49%	17.11%	23.32%
Nov-17	1.80%	3.01%	3.26%	7.48%	10.45%	13.51%	14.27%	18.89%	27.33%
Dec-17	2.00%	3.17%	3.48%	8.02%	10.45%	13.46%	14.18%	18.35%	26.91%
Jan-18	2.50%	3.78%	4.01%	8.82%	11.05%	13.94%	14.30%	18.35%	23.26%
Feb-18	3.25%	4.52%	4.52%	9.34%	11.08%	13.87%	14.53%	16.86%	22.02%
Mar-18	5.73%	6.96%	6.80%	12.44%	14.90%	14.65%	11.00%	12.34%	15.17%
Apr-18	7.27%	8.11%	7.84%	13.68%	16.23%	15.46%	10.29%	9.51%	11.61%
May-18	6.31%	7.54%	7.50%	13.09%	16.40%	15.66%	10.00%	9.80%	13.70%

				Distribution of RMO Shares Executed by Order Size					
Month	**<=100**	**101-300**	**301-500**	**501-1,000**	**1,001-2,000**	**2,001-4,000**	**4,001-7,500**	**7,500-15,000**	**>15,000**
Apr-17	11.39%	15.32%	11.28%	16.25%	12.77%	10.87%	9.27%	9.25%	3.61%
May-17	10.86%	20.10%	10.47%	13.77%	11.37%	10.58%	8.96%	9.44%	4.45%
Jun-17	7.65%	10.05%	8.48%	14.31%	11.28%	11.85%	12.00%	18.69%	5.68%
Jul-17	10.07%	12.67%	10.18%	15.57%	12.94%	11.79%	9.97%	10.27%	6.56%
Aug-17	9.93%	12.98%	10.89%	17.05%	14.16%	11.94%	9.38%	8.23%	5.45%
Sep-17	11.36%	13.46%	10.12%	16.01%	13.80%	13.07%	8.60%	8.61%	4.97%
Oct-17	10.83%	13.37%	10.07%	16.40%	14.46%	12.48%	9.47%	7.96%	4.96%
Nov-17	7.04%	10.64%	10.14%	19.81%	18.19%	13.96%	9.04%	7.10%	4.09%
Dec-17	8.25%	11.27%	10.37%	19.49%	17.05%	13.33%	8.82%	7.13%	4.28%
Jan-18	9.93%	12.43%	10.92%	19.37%	16.07%	12.66%	8.49%	6.49%	3.64%
Feb-18	12.63%	14.31%	11.81%	19.45%	15.07%	11.22%	6.81%	5.55%	3.16%
Mar-18	13.92%	15.35%	11.92%	19.14%	14.77%	10.05%	6.35%	5.49%	3.00%
Apr-18	14.81%	15.76%	11.86%	18.35%	13.47%	10.21%	6.75%	5.41%	3.39%
May-18	13.65%	15.78%	12.38%	18.77%	13.92%	10.57%	6.25%	5.27%	3.40%

The table below shows the average and median sizes of RMO removing orders.

Average and Median RMO Sizes		
Year	**RMO Taking Order Size**	
	Avg	**Median**
Apr-17	863	111
May-17	802	180
Jun-17	743	82
Jul-17	739	100
Aug-17	753	100
Sep-17	841	100
Oct-17	793	100
Nov-17	1,103	150
Dec-17	1,044	132
Jan-18	844	100
Feb-18	690	100
Mar-18	512	100
Apr-18	454	100
May-18	517	100

The data provided by the Exchange describes a valuable service that delivers considerable price improvement in a transparent and well-regulated environment. The Program represents just a fraction of retail orders, most of which are executed off-exchange by a wide range of order handling services that have considerably more market share and which operate pursuant to different rules and regulatory requirements. BX found no data or received any customer feedback that indicated any negative impact of the Program on overall market quality.

As discussed more fully below, the reports and assessments provided by the Exchange to the SEC have covered (i) the economic impact of the Program on the entire market; (ii) the economic impact of the Program on execution quality; (iii) whether only eligible participants are accessing Program liquidity; (iv) whether the Program is attracting retail participants; (v) the net benefits of the Program on participants; (vi) the overall success in achieving intended benefits; and (vii) whether the Program can be improved.

1. <u>Economic Impact of the RPI Program on the Entire Market</u>

The Exchange detected no negative impact on BX quote quality from the Program. Because the size of the Program is within the normal day-to-day fluctuations of market share between different venues, it is impossible to detect a correlation with a decline of order flow in another venue or order type. The Program did not negatively affect the overall quality of the market by causing liquidity-providing orders to move from the Exchange to the Program. The Program also did not diminish the quality of (or increase the toxicity of) other order types arriving at the Exchange.

The Program is intended to attract off-exchange order flow back to transparent and well-regulated exchange trading systems. Given current market structure, BX believes that the Program improves overall market quality by attracting desirable order flow and liquidity-providers back to the vigorous order competition available on-exchange.

Using correlation tests and visualization the Exchange failed to detect a significant relationship between the amount of RMO volume traded on BX and measurements of overall market quality. The results of correlation tests against 30-second realized spreads show minimal to no correlation.

Additionally, through time series visualization BX detects no significant changes in BX market quality measures during the life of the pilot Program. Metrics including quoted spreads, volatility, realized spreads, and depth were examined using executions on BX and the NBBO weighted by volume executed on BX. Both quoted and realized spreads did not show any dramatic changes following the implementation of the Program or as it gained traction over time. Consolidated trade-to-trade volatility appears to have decreased slightly in the middle of the Program.

2.   Economic Impact of the BX RPI Program on Execution Quality

To assess the execution quality of the Program, BX focused on symbol-day combinations when during market hours: (i) an RMO execution occurred on BX, (ii) a non-RMO execution occurred on BX, and (iii) a tape-eligible trade occurred on BX. Symbol day combinations are aggregated to overall daily statistics by either a simple average or by volume weighting by RMO executed volume during market hours.[24] This results in the number and identity of symbols captured in each daily average changing from day to day. Using this data, the Exchange examined whether the economic outcomes for RMO trades differs from non-RMO trades and/or all trades.

When comparing average price improvement for RMO and non-RMO executions for a

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[24]   Both RMO and non-RMO execution quality values are weighted by RMO volume and a very small number of extreme outlier symbol-day stats have been removed from the analysis.

subset of 100 stocks with the largest number of RMO shares executed, the price improvement seen in RMO and non-RMO trades is comparable over the life of the Program. When volume weighting the average price improvement by RMO volume to emphasize those stock/day combinations with the highest volume traded in RMO, average price improvement on BX for both RMO and non-RMO trades appear generally comparable over time, with RMO price improvement generally beating non- RMO. Note that this price improvement measure does not take rebates into account.

In the subset of active RMO symbols, RMO volume-weighted effective and realized spreads for RMO and all executions, which includes RMO executions, are generally comparable throughout the duration of the Program.

Similar to regular, liquidity-taking orders on BX, the Program offers inverted pricing where RMO orders receive a rebate (on top of the price improvement they receive) when executing against RPI liquidity, while there is a fee associated with RPI orders which post non-displayed, price-improving liquidity. RPI orders are charged $0.0025 per share. Retail Orders currently receive a rebate of $0.0021 per share when executing against RPI liquidity, a rebate of $0.0000 per share when executing against other hidden, price-improvising liquidity, and a rebate of $0.0017 per share when executing against other displayed liquidity on the BX book.

3. Are only Eligible Participants Accessing Program Liquidity

Only RMOs that have been approved by BX can enter RMO orders that access the Program liquidity, and the BX trading system does not allow non-RMO orders to access RPI providing orders. BX BX [sic] trading system does not allow non-RMO orders to access RPI providing orders. BX Rule 4780(c) enables BX at its sole discretion to disqualify RMO members that submit orders that fail to meet any of the requirements of the rule.

4.   Is the Program Attracting Retail Participation

The Program successfully attracted retail orders to the Exchange and participation in the Program has continued to increase over time. The Exchange believes that the success of the Program is in that it provided tangible price improvement and transparency to retail investors through a competitive pricing process.

Brokers route retail orders to a wide range of different trading systems. The Program offers a transparent and well-regulated option providing meaningful competition and price improvement. BX believes that it has achieved its goal of attracting retail order flow to BX and, as stated above, it has resulted in a significant price improvement to retail investors through a competitive pricing process. The Exchange also has not detected any negative impact to market quality as the Program has continued to grow over time.

BX RPI -- Shares executed by month
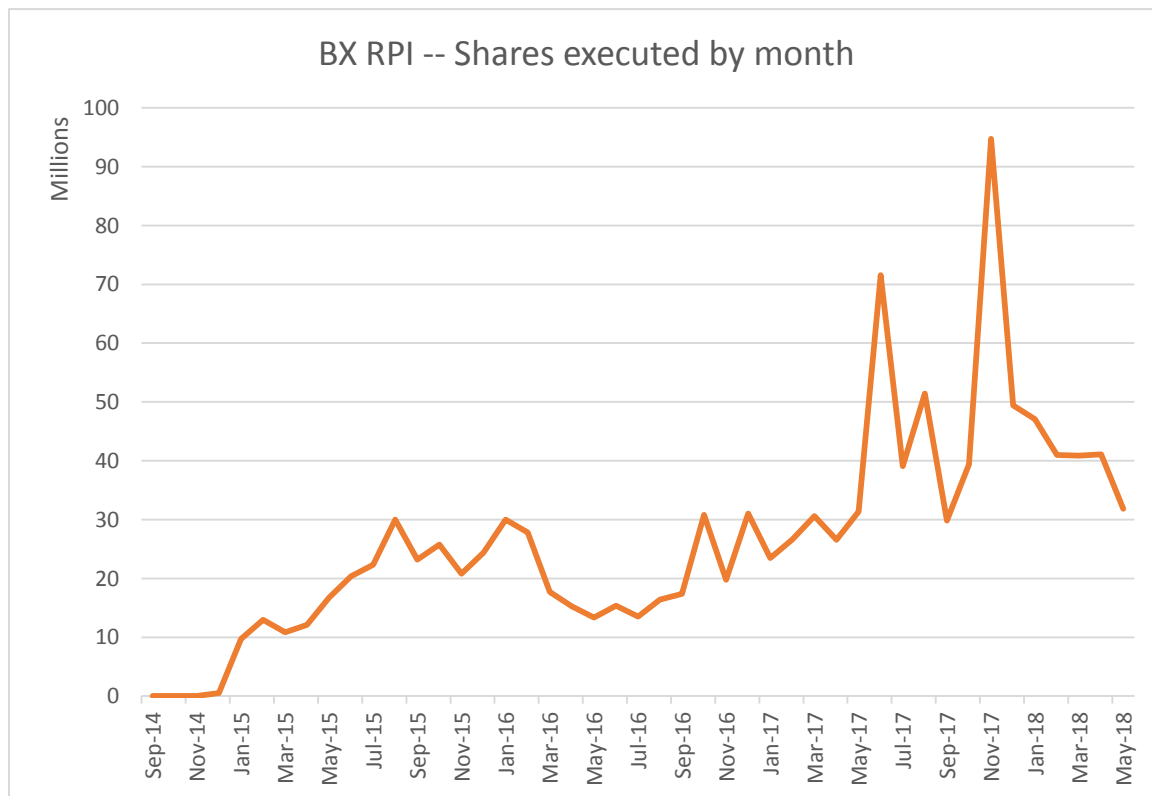
On average, an RMO execution continues to get more price improvement than the minimum $0.001 price improvement required of an RPI liquidity-providing order in the Program, and over time the price improvement seen on BX in non-RMO orders does not appear to be negatively impacted by the introduction of the Program.

     5.   Net Benefits of the Program on Participants

From the beginning of 2017 through January 2018, 97.9% of RMO shares ordered and 98.5% of RMO shares executed were RMO Type 1 orders, while the remainder were RMO Type 2 orders. Type 1 orders had an aggregated fill rate of 19.2%, while Type 2 orders had a fill rate of 4.1% in this timeframe.

Of the RMO Type 1 executions, 94.9% of shares were executed against RPI liquidity and 5.1% against other non-RPI price-improving hidden liquidity. Of the RMO Type 2 executions, 23.7% of shares were executed against RPI liquidity, 14% against other non-RPI price-improving hidden liquidity, and 62.3% against other liquidity on the BX book. None of the Type 2 orders entered included routing instructions to allow for executions away from BX.

The Exchange believes that the Program through retail order segmentation does create greater retail order flow competition and thereby increases the amount of this flow to BX. This helps to ensure that retail investors benefit from the price improvement that liquidity providers are willing to provide. The Program promotes competition for retail order flow by allowing Exchange members to submit RPI Orders to interact with Retail Orders. Such competition promotes efficiency by facilitating the price discovery process and generating additional investor interest in trading securities, thereby promoting capital formation.

The Program also promotes competition for retail order flow among execution venues, and this benefits retail investors by creating additional price improvement opportunities for marketable retail order flow, most of which is currently executed in the OTC markets without

ever reaching a public exchange. The Exchange believes that it has achieved its goal of attracting retail order flow to BX, and has resulted in a significant price improvement to retail investors through a competitive pricing process. The data also demonstrates that the Program has continued to grow over time and the Exchange has not detected any negative impact to market quality.

6. Overall Success in Achieving Intended Benefits

The Program has successfully demonstrated the effectiveness of a transparent, on-exchange retail order price improvement functionality, and while small relative to total consolidated volume, has succeeded in achieving its goals of attracting retail order flow and providing those orders with price improvement totaling tens of thousands of dollars each month.

The Program provides additional competition to the handling of retail orders. The additional opportunity for meaningful price improvement provides pressure on other more established venues to increase the price improvement that they provide. By doing this, the Program has a greater positive effect than the market share would directly indicate.

7. Can the Program be Improved

The Program provides a transparent, well-regulated, and competitive venue for retail orders to receive substantial price improvement. The size of the Program is somewhat limited by the rules that prevent BX from matching features offered by non-exchange trading venues. Nonetheless, the Exchange believes the Program is a success and it will continue to look for ways to further innovate and improve the Program. The Exchange believes that making the pilot permanent is appropriate and through this filing seeks to make permanent the current operation of the Program.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the provisions of

Section 6 of the Act,[25] in general, and with Section 6(b)(5) of the Act,[26] in particular, in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest and not to permit unfair discrimination between customers, issuers, brokers, or dealers.

The Exchange believes that making the pilot Program permanent is consistent with these principles because the Program is reasonably designed to attract retail order flow to the exchange environment, while helping to ensure that retail investors benefit from the better price that liquidity providers are willing to give their orders. During the pilot period, BX has provided data and analysis to the Commission, and this data and analysis, as well as the further analysis in this filing, shows that the Program has operated as intended and is consistent with the Act.

Additionally, the Exchange believes the proposed rule change is designed to facilitate transactions in securities and to remove impediments to, and perfect the mechanisms of, a free and open market and a national market system because the competition promoted by the Program facilitates the price discovery process and potentially generate additional investor interest in trading securities. Making the pilot Program permanent will allow the Exchange to continue to provide the Program's benefits to retail investors on a permanent basis and maintain the improvements to public price discovery and the broader market structure. The data provided by BX to the SEC staff demonstrates that the Program provided tangible price improvement and transparency to retail investors through a competitive pricing process.

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[25]   15 U.S.C. 78f.

[26]   15 U.S.C. 78f(b)(5).

As described below in BX's statement regarding the burden on competition, the Exchange also believes that it is subject to significant competitive forces. For all of these reasons, the Exchange believes that the proposal is consistent with the Act.

      B.   Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act, as amended. BX believes that making the Program permanent would continue to enhance competition for retail order flow among execution venues and contribute to the public price discovery process.

The Exchange believes that the data supplied to the Commission and experience gained over the life of the pilot have demonstrated that the Program creates price improvement opportunities for retail orders that are equal to what would be provided under OTC internalization arrangements, thereby benefiting retail investors and increasing competition between execution venues. BX also believes that making the Program permanent will promote competition between execution venues operating their own retail liquidity programs. Such competition will lead to innovation within the market, thereby increasing the quality of the national market system.

Additionally, the Exchange notes that it operates in a highly competitive market in which market participants can easily direct their orders to competing venues, including off-exchange venues. In such an environment, the Exchange must continually review, and consider adjusting the services it offers and the requirements, it imposes to remain competitive with other U.S. equity exchanges.

For the reasons described above, BX believes that the proposed rule change reflects this competitive environment.

C.   Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments were either solicited or received.

III.   Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the Federal Register or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission shall: (a) by order approve or disapprove such proposed rule change, or (b) institute proceedings to determine whether the proposed rule change should be disapproved.

IV.   Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic comments:

- Use the Commission's Internet comment form (http://www.sec.gov/rules/sro.shtml); or

- Send an e-mail to rule-comments@sec.gov. Please include File Number SR-BX-2018-025 on the subject line.

Paper comments:

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR-BX-2018-025. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (http://www.sec.gov/rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal offices of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that

you wish to make available publicly. All submissions should refer to File Number SR-BX-2018-025, and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[27]

Brent J. Fields
Secretary

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[27]   17 CFR 200.30-3(a)(12).