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SECURITIES AND EXCHANGE COMMISSION
[Release No. 34-87814; File No. SR-IEX-2019-15]

Self-Regulatory Organizations: Investors Exchange LLC; Notice of Filing of Proposed Rule Change to Add a New Discretionary Limit Order Type

December 20, 2019

Pursuant to Section 19(b)(1)[1] of the Securities Exchange Act of 1934 (the "Act"),[2] and Rule 19b-4 thereunder,[3] notice is hereby given that on December 16, 2019, the Investors Exchange LLC ("IEX" or the "Exchange") filed with the Securities and Exchange Commission ("SEC" or "Commission") the proposed rule change as described in Items I and II 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

(a) Pursuant to the provisions of Section 19(b)(1) under the Act,[4] and Rule 19b-4 thereunder,[5] IEX is filing with the Commission a proposed rule change to add a new Discretionary Limit order type (a "D-Limit" order).

The text of the proposed rule change is available at the Exchange's website at www.iextrading.com, at the principal office of the Exchange, and at the Commission's Public Reference Room.

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

2 15 U.S.C. 78a.

3 17 CFR 240.19b-4.

4 15 U.S.C. 78s(b)(1).

5 17 CFR 240.19b-4.

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 self-regulatory organization 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 Item IV below. The self-regulatory organization 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 introduce a new order type, a Discretionary Limit or "D-Limit" order, that is designed to protect liquidity providers from potential adverse selection by latency arbitrage trading strategies.[6]

Background

IEX believes that in the current market environment, market participants that have access to the fastest and most complete view of market data from all the major exchanges are able to predict imminent changes to national best bid and offer quotations ("NBBO"),[7] representing the best displayed bid and offer prices that are available in the market at any point in time. By sending orders to "take liquidity" against orders that are resting on exchanges or other trading venues in very small windows of time, generally no more than a few milliseconds before an anticipated change in the NBBO, trading firms seeking to exploit these speed and information

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6 As proposed, a D-Limit order is also eligible to take resting liquidity on entry. If not executed on entry, the order will post to the Order Book and be available to provide liquidity.

7 The term "NBBO" means the national best bid or offer, as set forth in Rule 600(b) of Regulation NMS under the Act, determined as set forth in IEX Rule 11.410(b). See IEX Rule 1.160(u).

asymmetry advantages can profit, to the corresponding disadvantage of institutional investors and other participants, whose resting orders are "picked off" by these faster firms at "stale" prices.

IEX further believes that this trading activity creates a substantial disincentive to market participants to provide exchange quotes and other orders that rest on exchanges' order books. To compensate for the resulting adverse selection, among other reasons, many exchanges employ maker-taker style fee schedules which pay rebates to liquidity providers that trade on their markets ("Maker-Taker").

This phenomenon, commonly referred to as "latency arbitrage," has led to proposals by equity and futures markets specifically designed to provide protection for resting orders in order to incentivize market makers and other liquidity providers to maintain tighter spreads with larger size. Most recently, Cboe EDGA Exchange, Inc. ("EDGA") proposed a four-millisecond asymmetrical delay mechanism or "speed bump" that would apply only to incoming executable orders.[8] As set forth in its rule change proposal seeking Commission approval of this asymmetrical speedbump, EDGA states that the purpose of the asymmetrical speed bump is to provide "an opportunity for liquidity providers to process cross-asset signals, and update their published quotations accordingly, before trading at stale prices with orders submitted by opportunistic trading firms that benefit from a latency advantage."[9] The EDGA proposal describes the challenges for liquidity providers as follows:

> Today, liquidity providers are frequently unable to adjust their displayed quotes based on changes in market information … before the fastest trading firms can trade against their quotes. Market makers and other liquidity providers use sophisticated pricing algorithms to determine how to price securities in the often hundreds or thousands of equity

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8 See Securities Exchange Act Release No. 86168 (June 20, 2019), 84 FR 30282 (June 26, 2019) (SR-CboeEDGA-2019-012).

9 See supra note 8, at 30283.

> securities that they quote. … The potential for trading at stale prices increases risk for firms that wish to provide liquidity to the market, and harms market quality by causing liquidity providers to enter quotes that are wider or for a smaller size than they may otherwise be willing to trade.[10]

As discussed more fully below, IEX's proposal to establish a D-Limit order type is designed to protect liquidity providers, institutional investors as well as market makers, from potential adverse selection by latency arbitrage trading strategies in a fair and nondiscriminatory manner, without, as some commenters have mentioned, introducing concerns around unnecessary complexity, disparate treatment, and fair access by institutional investors to displayed quotations that have been voiced with regard to the EDGA asymmetrical speed bump proposal.[11]

Since before and after it became an exchange, IEX has sought to design its market in a way that creates a transparent and level playing field where both investors and market professionals can participate and have confidence in the fairness of the system. In general, these aspects of our market involve ways to counter or reduce speed advantages that can harm investors by exposing them to execution at stale prices when their orders are traded against by traders with more complete and timely information about market prices.

These aspects include the use of a so-called "speed bump," a symmetrical delay mechanism consisting of a length of coiled optical fiber, which, together with the physical distance from the location where members connect to the IEX systems where orders are matched, delays all incoming orders by 350 microseconds. The speed bump is designed to protect non-displayed orders, typically placed on behalf of institutional investors, that are

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10 See supra note 8, at 30283.

11 See comments on Release No. 34-86168; File No. SR-CboeEDGA-2019-012 available at: https://www.sec.gov/comments/sr-cboeedga-2019-012/srcboeedga2019012.htm.

"pegged" to a given price, often the midpoint of the NBBO, i.e., the Midpoint Price.[12] The speed bump allows IEX's matching engine to update the prices of resting pegged orders in line with price changes on other markets to lessen the possibility of adverse selection when a new Midpoint Price is established. By repricing the order based on the current market, resting orders are less likely to be executed at stale prices when incoming orders by other exchange participants with the advantage of a more current view of market prices seek to execute against resting pegged orders on IEX.

The speed bump works together with certain non-displayed order types that are designed to provide further protection to non-displayed orders and encourage brokers to place those orders on IEX. These include Discretionary Peg[13] ("DPeg"), which, in its current iteration, is an order pegged to trade at one minimum price variation, or "tick," below the national best bid ("NBB"),[14] in the case of buy orders, or one tick above the national best offer ("NBO"),[15] in the case of sell orders, unless the submitter of the order has specified a limit price that is less aggressive than this default resting price. For most stocks, the minimum tick under Commission rules is one cent. In most circumstances, DPeg orders can also trade at a more aggressive price (one more favorable to the counterparty), but only to the midpoint, when there are incoming orders that are willing to trade at that price.

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12 See IEX Rule 1.160(t).

13 See IEX Rule 11.190(b)(10). IEX has two other order types that are based on the DPeg order type: the Retail Liquidity Provider order and the Corporate Discretionary Peg order. See Rule 11.190(b)(14) and (16).

14 The term "NBB" shall mean the national best bid, as set forth in Rule 600(b) of Regulation NMS under the Act, determined as set forth in IEX Rule 11.410(b). See Rule 1.160(u).

15 The term "NBO" shall mean the national best offer, as set forth in Rule 600(b) of Regulation NMS under the Act, determined as set forth in IEX Rule 11.410(b). See Rule 1.160(u).

Similarly, the primary peg[16] ("PPeg") order type is pegged to one tick below the NBB, for a buy order, and one tick above the NBO, for a sell order, but is also available to trade at a price up to the NBB or down to the NBO, unless further restricted by the order's limit price. When DPeg and PPeg orders are eligible to trade at prices more aggressive than their default prices, they are said to be "exercising discretion" to trade at these more aggressive prices.

In addition, IEX uses a proprietary mathematical calculation, the crumbling quote indicator ("CQI"), to determine when its pegged order types are eligible to exercise discretion. The CQI is a transparent formula, codified in IEX's rulebook, designed to predict whether a particular quote is unstable or "crumbling," meaning that the NBB is likely about to decline or the NBO is likely about to increase. As set forth in IEX Rule 11.190(g), the Exchange utilizes real time relative quoting activity of certain Protected Quotations[17] and a proprietary mathematical calculation (the "quote instability calculation") to assess the probability of an imminent change to the current Protected NBB to a lower price or Protected NBO to a higher price for a particular security ("quote instability factor"). When the quoting activity meets predefined criteria and the quote instability factor calculated is greater than the Exchange's defined quote instability threshold, the System[18] treats the quote as unstable and the CQI is on at that price level for up to two milliseconds (hereafter referred to as the "quote instability determination price level" or the "CQI Price"). During all other times, the quote is considered stable, and the CQI is off. The System independently assesses the stability of the Protected NBB

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16 See IEX Rule 11.190(b)(8).

17 Pursuant to IEX Rule 11.190(g), references to "Protected Quotations" include quotations from the New York Stock Exchange LLC ("NYSE"); The Nasdaq Stock Market LLC ("Nasdaq"); NYSE Arca, Inc. ("NYSE Arca"); Nasdaq BX, Inc. ("Nasdaq BX"); Cboe BZX Exchange, Inc. ("Cboe BZX"); Cboe BYX Exchange, Inc. ("Cboe BYX"); Cboe EDGX Exchange, Inc. ("EDGX"); and EDGA.

18 See IEX Rule 1.160(nn).

and Protected NBO for each security.[19]

When IEX determines, pursuant to the CQI methodology, that the current market for a security is unstable - meaning there is a heightened probability of an imminent quote change at the NBB or NBO - IEX's System will prevent DPeg and PPeg orders on that side of the market from exercising discretion and trading at a price that is more aggressive than their default resting prices. In this way, IEX seeks to protect these orders from being executed at unfavorable prices during these very short periods of time when they face a high risk that the market price will immediately move against them, and IEX's System allows them to trade at more aggressive prices, with a higher probability of execution, in all other circumstances.

DPeg and PPeg orders have been widely adopted by a diverse group of IEX Members. During September 2019, such orders constituted 38% of overall IEX traded volume (DPeg volume was 35% and PPeg volume was 3%) and 55% of liquidity adding volume (DPeg volume was 49% and PPeg volume was 6%). 70 of 145 IEX Members traded using DPeg or PPeg orders (these Members represent 90% of the total volume traded on IEX), with 84% of this volume originating from full-service firms, 9% from proprietary trading firms, and 7% from agency firms.[20] IEX believes that this usage evidences that a large range of market participants with diverse business models have a high degree of confidence in the utility of the CQI formula.

All of these aspects of IEX's design – the speed bump, the pegged order types, and the CQI – are designed to work together to provide better execution opportunities for these orders,

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19 IEX has revised the CQI formula twice since its exchange launch in order to enhance the accuracy of the CQI in predicting quote instability and increasing the protection provided to pegged orders.

20 See infra note 58 and accompanying text for a discussion of IEX's classification of its Members' logical order entry ports.

which are favored by institutional investors, by protecting them from being executed at inferior prices in narrow time windows when the NBBO is in transition. As described further below, these features have provided substantial benefits in terms of execution outcomes to investors and other participants using these IEX order types.

In addition to these other features of IEX's market, since January 1, 2018, IEX has imposed an additional fee on Members that send more than a certain threshold of their orders to take liquidity during periods when the CQI is on (the "CQ Remove Fee"). The CQ Remove Fee is intended to incentivize participants to send orders to provide liquidity to IEX by reducing the volume of orders involving trading strategies that seek to exploit information advantages while the NBBO is in transition. The CQ Remove Fee has resulted in an incremental reduction in the use of such strategies on IEX. IEX believes the limited impact from the fee is a result of the fact that the potential profits from the use of such strategies substantially exceed the profits lost from the CQ Remove Fee.[21]

The innovations IEX has introduced have succeeded in providing new execution opportunities for investors, particularly through the use of the pegged order types described above, and they have provided IEX participants with opportunities for improved executions compared to other venues.[22] At the same time, IEX believes that the willingness of market participants to provide liquidity through other order types, including displayed orders, is substantially negatively affected by the trading strategies described above. Without an order type that leverages the protective features of the CQI, 24% of displayed volume on IEX is

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21 The Exchange is effectively limited in setting the CQ Remove Fee by Rule 610(c) of Regulation NMS. 17 CFR 242.610(c).

22 See, e.g., Wah, Elaine, et al. "A Comparison of Execution Quality across U.S. Stock Exchanges," (April 19, 2017), available at https://iextrading.com/docs/A%20Comparison%20of%20Execution%20Quality%20across%20U.S.%20Stock%20Exchanges.pdf

executed when the CQI is on, compared to only 3% of nondisplayed volume during September 2019. As discussed in detail below, IEX trading data reveals that liquidity-providing orders that are executed while the CQI is on are subject to significant differences in short term markouts,[23] compared to liquidity-providing orders executed when the CQI is off, and the significant volume of orders that are sent during these very small time intervals (on IEX as well as other exchanges) accentuates this impact.

Maker-Taker exchanges use rebate payments to induce participants to post quotes and other resting orders on exchanges notwithstanding these negative impacts. A variety of significant concerns have been raised regarding the effect of paying rebates as compensation to a relatively small number of liquidity providers, which include conflicts of interest, increased market fragmentation, effectiveness, and adding unnecessary complexity to overall equity market structure by incentivizing market participants to attempt to continually readjust their order routing to navigate a multitude of constantly changing transaction fee schedules.[24] The Commission has adopted a transaction fee pilot, to assess these concerns about existing exchange fee structures, which is designed to test potential improvements to market quality from reducing access fees and prohibiting rebates on all exchanges.[25] Moreover, the substantial use of "Taker-Maker" exchange fee models, which charge fees to liquidity providing orders and pay rebates to liquidity taking orders, evidences that exchanges can compete for displayed order flow without

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23 The term markouts refers to changes in the midpoint of the NBBO measured from the perspective of either the liquidity providing resting order or liquidity removing taking order over a specified period of time following the time of execution.

24 See generally, transcript of Commission "Roundtable on Market Data Products, Market Access Services, and their Associated Fees" (October 25, 2018) available at: https://www.sec.gov/spotlight/equity-market-structure-roundtables/roundtable-market-data-market-access-102518-transcript.pdf.

25 See Securities Exchange Act Release 84875 (December 19, 2018); 84 FR 5202 (February 20, 2019).

paying rebates.

In view of these factors, the Exchange believes that it is appropriate to also leverage the CQI to expand the IEX protective design to displayed and non-pegged non-displayed limit orders.[26] The Exchange further believes that providing such protection would incentivize the entry of liquidity providing orders on IEX by protecting such orders from adverse selection by market participants leveraging sophisticated latency arbitrage strategies to exploit informational advantages when IEX's probabilistic model determines that the market appears to be moving adversely to them.

Accordingly, IEX is proposing the D-Limit order type as an alternative means of encouraging market makers and other participants, including institutional investors, to provide liquidity, by adjusting the price of these orders in the narrow time windows when the CQI is on, to better protect them from being "picked off" during those intervals. IEX believes that D-Limit represents a logical extension of its efforts to date to create a trading platform that encourages participation by investors and market professionals and maximizes opportunities for investors to trade at a fair price. D-Limit orders would be available to all IEX Members in a fair and nondiscriminatory manner.

As discussed further below, IEX believes that exchanges must be allowed to innovate in narrowly targeted ways to protect resting orders from being unfairly exploited by information asymmetries. IEX also believes such measures are important to enhance the value and integrity of protected quotes generally, and that D-Limit will benefit market quality by leading to deeper

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[26] IEX currently allows limit orders to be either "displayed, non-displayed, or partially displayed." See IEX Rule 11.190(a)(1). Displayed orders must be limit orders, see IEX Rule 11.190(b)(1), but non-displayed orders can be either a market, limit, or pegged order. See IEX Rule 11.190(b)(3). Furthermore, pegged orders can be submitted with or without a limit price, with the exception of Market Maker Peg orders, which must be limit orders. See IEX Rule 11.190(b)(8), (9), (10), (13), and (16).

liquidity, displayed and non-displayed, and increased opportunities for participants interacting with this liquidity to receive favorable executions.

Proposal

The Exchange proposes to amend IEX Rule 11.190(b)(7), which is currently reserved, to add a D-Limit order which may be a displayed or non-displayed limit order that upon entry and when posting to the Order Book,[27] is priced to be equal to and ranked at the order's limit price,[28] but will be adjusted to a less-aggressive price during periods of quote instability, as defined in IEX Rule 11.190(g), as described more fully below. Otherwise, a D-Limit order will operate in the same manner as a displayed or non-displayed limit order, as applicable.

As proposed, if upon entry of a D-Limit buy (sell) order the CQI is on and the order has a limit price equal to or higher (lower) than the quote instability determination price level (i.e., the CQI Price), the price of the order will be automatically adjusted by the System to one (1) MPV[29] lower (higher) than the CQI price. Similarly, when unexecuted shares of a D-Limit buy (sell) order are posted to the Order Book, if a quote instability determination is made and such shares are ranked and displayed (in the case of a displayed order) by the System at a price equal to or higher (lower) than the CQI Price, the price of the order will be automatically adjusted by the System to one (1) MPV lower (higher) than the CQI Price. A D-Limit order that is subject to an automatic adjustment will not revert to the price at which it was previously ranked and displayed (in the case of a displayed order). Once the price of a D-Limit order that has been posted to the Order Book is automatically adjusted by the System, the order will continue to be ranked and

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27 See IEX Rule 1.160(p).

28 A non-displayed D-Limit order with a limit price more aggressive than the Midpoint Price will be subject to the Midpoint Price Constraint and be booked and ranked on the Order Book at a price equal to the Midpoint Price pursuant to IEX Rule 11.190(h)(2).

29 See IEX Rule 11.210.

displayed (in the case of a displayed order) at the adjusted price, unless subject to another automatic adjustment, or if the order is subject to the price sliding provisions of IEX Rule 11.190(h). When the price of a D-Limit order is adjusted the order will receive a new time priority. If multiple D-Limit orders are adjusted at the same time, their relative time priority will be maintained. Further, when the price of a D-Limit order is adjusted, the Member that entered the order will receive an order restatement message from the Exchange notifying the Member of the price adjustment.[30]

D-Limit orders are subject to the price sliding provisions of IEX Rule 11.190(h), as noted above. This provision provides for price sliding in the event of a locked or crossed market, to enforce the Midpoint Price Constraint,[31] to comply with the display or execution requirements for a short sale order not marked short exempt during a Short Sale Period,[32] or to comply with the Limit Up-Limit Down Price Constraint.[33] As set forth in IEX Rule 11.190(h), an order that has been subject to price sliding will be repriced back to its more aggressive limit price when the market condition changes such that the condition necessitating the price sliding is no longer applicable.[34]

Pursuant to proposed IEX Rule 11.190(b)(7), a D-Limit order:

(A) Must be submitted with a limit price.

(B) May have a TIF of DAY, GTX, SYS or GTT.

(C) Is not eligible for routing pursuant to IEX Rule 11.230(b) and (c)(2).

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30 A restatement notice is an automated message from the Exchange System informing the Member that the price of its order has been adjusted.

31 See note 28 supra.

32 See IEX Rule 11.290(d).

33 See IEX Rule 11.190(h)(5).

34 See IEX Rule 11.190(h) for a complete description of the price sliding provisions. See also note 28 supra regarding applicability of the Midpoint Price Constraint.

(D) May not be an ISO.[35]

(E) Is eligible to trade only during the Regular Market Session.[36] A D-Limit order marked with a TIF of DAY that is submitted to the System before the opening of the Regular Market Session will be queued by the System until the start of the Regular Market Session; a D-Limit order marked with a TIF other than DAY will be rejected when submitted to the System during the Pre-Market Session.[37] A D-Limit order submitted into the System after the closing of the Regular Market Session will be rejected.

(F) May not be a minimum quantity order.[38]

(G) May be an odd lot, round lot, or mixed lot. However, a D-Limit order marked for display will not be displayed unless it is at least one round lot. If a D-Limit order marked for display is submitted with, or decremented either by execution or the User order amendment to an order quantity of less than one round lot, it will be treated as an odd lot order which is, by definition, non-displayed and will receive a new time stamp, pursuant to IEX Rule 11.220(a)(3).

(H) May not be a Reserve Order.[39]

(I) Displayed Discretionary Limit orders are not eligible to be invited by the System to Recheck as described in IEX Rule 11.230(a)(4)(D).

(J) Discretionary Limit orders are subject to the Price Sliding provisions of IEX Rule 11.190(h).

The proposed rule change would thus extend the protective features of the CQI to displayed and non-displayed D-Limit orders to protect such orders from potential adverse selection by preventing them from trading at a price that IEX's CQI formula predicts is unstable and thus imminently stale.

The following examples illustrate the operation of the price adjustment functionality of D-Limit orders:[40]

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35 See IEX Rule 11.190(b)(12).

36 See IEX Rule 1.160(gg).

37 See IEX Rule 1.160(z).

38 See IEX Rule 11.190(b)(11).

39 See IEX Rule 11.190(b)(2).

40 The following examples all describe D-Limit buy orders. Each of the examples also applies to a D-Limit sell order, except that any price adjustments to a D-Limit sell order

1. The PBBO[41] in XYZ is 10.05 – 10.10 and a displayed D-Limit order to buy with a limit price of 10.05 is resting on the IEX Order Book at its limit price. A quote instability determination is made at the PBB[42] of 10.05. Because the limit (and displayed) price of the D-Limit order is equal to the CQI Price, the price of the order is adjusted to 10.04.
2. The PBBO in XYZ is 10.05 – 10.10 and a displayed D-Limit order to buy with a limit price of 10.04 is resting on the IEX Order Book at its limit price. A quote instability determination is made at the PBB of 10.05. Because the limit and displayed price of the D-Limit order is less than the CQI Price, the price of the order is not adjusted.
3. Following the order adjustment in Example 1, the PBB reverts to 10.05. The order remains displayed at its adjusted limit price of 10.04 because a D-Limit order that has been adjusted continues to be ranked and displayed at its adjusted price, regardless of a change in the PBB, unless subject to another automatic adjustment.
4. Following the order adjustment in Example 1, a new quote instability determination is made at the PBB of 10.04. Because the limit and displayed price of the D-Limit order is equal to the CQI Price, the price of the order is adjusted again to 10.03.
5. Following the order adjustment in Example 1, the PBB reverts to 10.05 and a new quote instability determination is made at the PBB of 10.05. Because the limit and displayed price of the D-Limit order is lower than the CQI Price, the price of the order is not adjusted.
6. The PBBO in XYZ is 10.05 – 10.10 and a non-displayed D-Limit order to buy with a limit price of 10.06 is resting on the IEX Order Book at its limit price. A quote instability determination is made at the PBB of 10.05. Because the limit price of the D-Limit order is higher than the CQI Price, the price of the order is adjusted to 10.04.
7. The PBBO in XYZ is 10.05 – 10.10 and a non-displayed D-Limit order to buy with a limit price of 10.05 is resting on the IEX Order Book at its limit price. A quote instability determination is made at the PBB of 10.05. Because the limit price of the D-Limit order is equal to the CQI Price, the price of the order is adjusted to 10.04. Subsequently, the PBB moves to 10.03 and a new quote instability determination is made at the PBB of 10.03. The price of the order is adjusted to a price of 10.02.
8. The PBBO in XYZ is 10.05 – 10.10 and the quote instability determination is in effect for the PBB at 10.05. A D-Limit order to buy XYZ with a limit price of 10.05 enters the IEX Order Book. Because the limit price of the order is equal to the CQI Price in effect, the price of the order is adjusted to and booked at 10.04.[43]

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would adjust the order price to one MPV above the CQI Price in effect.

41 The term "PBBO" refers to the national best bid or offer that is a protected quotation, determined as set forth in IEX Rule 11.410(b). See IEX Rule 1.160(cc).

42 The term "PBB" refers to the national best bid that is a protected quotation, determined as set forth in IEX Rule 11.410(b). See IEX Rule 1.160(cc).

43 The order is not executable on entry at 10.04 because of the Midpoint Price Constraint. Pursuant to IEX Rule 11.190(h)(2), a non-displayed limit order posting to the Order Book which has a limit price more aggressive than the Midpoint Price will be booked and

9. The PBBO in XYZ is 10.05 – 10.10 and the quote instability determination is in effect for the PBB at 10.05. A D-Limit order to buy XYZ with a limit price of 10.04 enters the IEX Order Book. Because the limit price of the order is lower than the CQI Price in effect, the price of the order is not adjusted.[44]

10. The PBBO in XYZ is 10.05 – 10.10 and the quote instability determination is in effect for the PBB at 10.05. A D-Limit order to buy XYZ with a limit price of 10.06 enters the IEX Order Book. Because the limit price of the order is higher than the CQI Price in effect, the price of the order is adjusted to and booked at 10.04.[45]

11. The PBBO in XYZ is 10.05 – 10.10 and the quote instability determination is in effect for the PBB at 10.05. The PBB crumbles to 10.04 but the quote instability determination is still in effect at 10.05. A D-Limit order to buy XYZ with a limit price of 10.05 enters the IEX Order Book. Because the limit price of the order is equal to the CQI Price in effect, the price of the order is adjusted to and booked at 10.04.[46]

12. The PBBO in XYZ is 10.04 – 10.10 and the quote instability determination is in effect at 10.05 (the prior PBB). A D-Limit order to buy XYZ with a limit price of 10.05 enters the IEX Order Book. Because the limit price of the order is equal to the CQI Price in effect, the price of the order is adjusted to and booked at 10.04.[47]

13. The PBBO in XYZ is 10.04 – 10.10 and the quote instability determination is in effect at 10.05 (the prior PBB). A D-Limit order to buy XYZ with a limit price of 10.06 enters the IEX Order Book. Because the limit price of the order is higher than the CQI Price in effect, the price of the order is adjusted to and booked at 10.04.[48]

14. The PBBO in XYZ is 10.04 – 10.10 and the quote instability determination is in effect at 10.05 (the prior PBB). A D-Limit order to buy XYZ with a limit price of 10.04 enters the IEX Order Book. Because the limit price of the order is lower than the CQI Price in effect, the price of the order is booked at 10.04.[49]

D-Limit orders would be available to all Members on a fair and impartial basis and no particular technology or access to high speed connectivity or market data is necessary to obtain the protective benefits of a D-Limit order. The Exchange will adjust the price of a D-Limit order

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ranked on the Order Book non-displayed at a price equal to the Midpoint Price.

44 The order is not executable on entry. See supra note 43.

45 The order is not executable on entry. See supra note 43.

46 The order is not executable on entry. See supra note 43.

47 The order is not executable on entry. See supra note 43.

48 The order is not executable on entry. See supra note 43.

49 The order is not executable on entry. See supra note 43.

based on the transparent, rule-based CQI formula. In contrast, the use of "asymmetric" speed bumps (those imposed only on the taker of liquidity) in order to provide a benefit to resting orders, requires access to sophisticated technology, connectivity and market data in order to cancel or adjust an order in the brief time period that an incoming order is delayed.

IEX is not proposing any changes to IEX Rule 11.240(c) which specifies that the System operates as an "automated market center" and displays "automated quotations" within the meaning of Regulation NMS, except in the event that a systems malfunction renders the System incapable of displaying automated quotations. Automated quotations of an automated trading center are protected quotations pursuant to Rule 600(b)(62) of Regulation NMS[50] and entitled to trade-through protection pursuant to Rule 611 of Regulation NMS[51] (the "Order Protection Rule"). Consequently, displayed D-Limit orders will qualify as automated quotations within the meaning of Regulation NMS (except in the event that a systems malfunction renders the System incapable of displaying automated quotations).[52]

2. Statutory Basis

IEX believes that the proposed rule change is consistent with the provisions of Section 6(b)[53] of the Act in general, and furthers the objectives of Section 6(b)(5) of the Act[54] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, 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

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50 17 CFR 242.600(b)(62).

51 17 CFR 242.611.

52 17 CFR 242.602(a)(3)(i).

53 15 U.S.C. 78f.

54 15 U.S.C. 78f(b)(5).

investors and the public interest. Specifically, the Exchange believes the proposed rule change is consistent with the protection of investors and the public interest because it is designed to protect resting D-Limit orders from adverse selection associated with latency arbitrage by limiting execution to one MPV lower than the CQI Price (for buy orders) or one MPV higher than the CQI Price (for sell orders) when the Exchange's probabilistic model identifies that the NBB or NBO appears to be moving adversely to them, thereby reducing the potential to execute at an imminently stale price.

In addition, the Exchange believes that the proposed rule change is consistent with the protection of investors and the public interest because it is designed to incentivize the entry of additional resting orders, including displayed orders on the Exchange, thereby enhancing price discovery and the overall liquidity profile on the Exchange to the benefit of all market participants. Based on market data analysis during September 2019, the Exchange identified that there are significant differences in short term markouts (and pro forma profit and loss)[55] for resting and taking orders between executions when the CQI is on and off, regardless of whether the NBB (NBO) moves lower (higher) within two milliseconds of the Exchange's determination of quote instability. Specifically, when the CQI is on, liquidity removing orders that execute on IEX (trading with a liquidity providing order resting on the Order Book, including but not limited to Discretionary Peg and primary peg orders) experience positive price markouts one second after the trade on a share basis 76% of the time, compared to 23.5% of the time when the CQI is off. Correspondingly, resting liquidity providing orders that trade when the CQI is on experience negative price markouts one second after the trade 76% of the time, compared to

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55 For purposes of this analysis, a pro forma profit or loss is calculated as the difference between the midpoint of the NBBO at the time of the execution compared to one second after.

23.5% of the time when CQI is off. Similarly, 55.9% of all orders received when the CQI is on (whether or not executed on IEX) arrive immediately prior to a favorable price move (based on one second markouts), compared to 19.5% of orders received when the CQI is off.

Moreover, the breakdown of orders entered and shares removed when the CQI is on or off evidences that certain trading strategies appear to involve entering liquidity taking orders targeting resting orders at prices that are likely to imminently move adversely from the perspective of the resting order. Across all approximately 8,000 symbols available for trading on IEX, the CQI is on only 1.64 seconds per symbol per day on average (0.007% of the time during regular market hours),[56] but 33.7% of marketable orders[57] are received during those time periods, which indicates that certain types of trading strategies are seeking to aggressively target liquidity providers during periods of quote instability.

Further, based upon IEX's classification of its Members' logical order entry ports (also known as "sessions") as originating from proprietary trading firms, full service broker-dealers, or agency broker-dealers,[58] proprietary trading firms are more likely to seek to trade against IEX

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56 On a volume weighted basis, the CQI is on for 5.9 seconds per day per symbol, 0.025% of the time during regular market hours. IEX plans to file a proposed rule change with the Commission shortly to incrementally optimize and enhance the effectiveness of the quote instability calculation in determining whether the CQI is on. Based on a modeling analysis, IEX estimates that the updated calculation will result in the CQI being on 0.009% of the time during regular market hours, on average, and incrementally increase the expected number of CQI determinations by approximately 20%.

57 An order is considered marketable for this analysis if it was a market order or its limit price is at or more aggressive than the contra-side quotation.

58 On a best efforts basis, IEX classifies proprietary trading firms as those that are trading for their own account rather than acting in an agency capacity for an independent beneficial owner. Agency broker-dealers are firms that trade on behalf of customers that are independent beneficial owner but do not commit capital to facilitate their customers' orders. Full-service broker-dealers are also trading on behalf of an independent beneficial owner but they also have the ability to commit capital to facilitate a customer order.

resting orders while the CQI is on, while sessions classified as full-service and agency are more likely to seek to trade against IEX resting orders during the remainder of the day. Within the two millisecond periods following CQI determinations, proprietary trading firms submit 6.8 times as many marketable-to-mid shares (i.e., shares priced at least as aggressively as the midpoint and eligible to trade) compared to full-service and agency firms; while outside of those two millisecond periods, the situation is reversed, with full-service and agency firms submitting 3.4 times as many marketable-to-mid shares compared to proprietary trading firms (based on daily averages from September 2019).

When looking at the impact of trading when the CQI is on and off for non-pegged limit orders, the data strongly supports that such orders are systematically subjected to adverse impacts of latency arbitrage strategies. During September 2019, non-pegged limit orders accounted for 17% of volume traded on IEX (13% of traded volume was from displayed limit orders). In the aggregate, these orders experienced significant differences in short term markouts (and pro forma profit and loss) between executions when the CQI is on and off, regardless of whether the NBB (NBO) moves lower (higher) within two milliseconds of the Exchange's determination of quote instability. Resting limit orders that trade when the CQI is on experience negative price markouts one second after the trade 76% of the time, compared to 34% of the time when CQI is off. In addition, for marketable incoming orders to take liquidity that arrive when IEX has a displayed quote, 21% arrive during the 0.007% of the trading day when the CQI is on.

Moreover, for displayed limit orders that added liquidity during September 2019, the disparity in markouts between such orders that traded when the CQI was on versus off was material and evident of latency arbitrage.[59] For such orders that traded when the CQI was on, the

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[59] See Stockland, Eric. "Modern Day Latency Arbitrage: Predicting Price Changes," (April

average markouts were negative $.0036 per share ten milliseconds after trade time. In contrast, when the CQI was off, the average markouts were positive $.0045 at 10 milliseconds, a performance difference of $.0081 per share at 10 milliseconds post trade. From one second though five minutes the performance difference between CQI on vs CQI off trades was never smaller than $.0048 per share.

The Exchange believes that this data is particularly significant and evidences that Members entering liquidity taking orders when the CQI is on appear to be able to engage in a form of latency arbitrage by leveraging fast proprietary market data feeds and connectivity along with predictive strategies to chase short-term price momentum and successfully target resting orders at unstable prices. IEX believes that these types of trading strategies, with concentrated and aggressive tactics during moments of quote instability, are detrimental to the experience of other IEX participants. As further discussed below, IEX believes that such trading strategies create disparate burdens on resting orders, particularly limit orders that do not currently benefit from the CQI or the speedbump.

The Exchange believes that IEX data thus demonstrates that displayed and non-displayed limit orders are subject to systematic adverse impacts from latency arbitrage strategies. The Exchange believes that these adverse impacts constitute an implicit tax on liquidity providers that operates to disincentivize market participants from entering limit orders that contribute to meaningful price discovery. Other exchanges use rebates and volume tiers to essentially compensate market makers and other liquidity providers for posting aggressive limit orders.[60]

10, 2017), available at https://medium.com/boxes-and-lines/modern-day-latency-arbitrage-predicting-price-changes-738edc25a28d.

60 See, e.g., NYSE Price List 2019, available at https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Price_List.pdf; see also Nasdaq General Equity and Options Rule, Equity 7 Section 118(a)(1) available at

As discussed above, IEX believes that these pricing schemes can contribute to a number of conflicts of interest and market distortions including, among others, conflicts of interests, excess intermediation and potential adverse selection, market fragmentation, complexity, the proliferation of new order types to enable avoidance of fees, and elevated fees to subsidize rebates.[61] In contrast, IEX seeks to incentivize liquidity providing orders through superior execution quality, but this incentive can be undercut by trading strategies that target resting orders during periods of quote instability. Thus, IEX believes that additional approaches to incentivize displayed liquidity are warranted, and that the D-Limit order type is one reasonable approach to compete with other venues for liquidity providing order flow without relying on rebates and tiered pricing. As discussed above, the widespread adoption of DPeg and PPeg order types that utilize the CQI formula evidences that a diverse group of Members have confidence in the utility of the CQI and its protective features. IEX believes that, as a result, a similarly diverse group of Members are likely to use D-Limit orders.

The Exchange further believes that the proposed rule change is consistent with the Act because it would be available to all Members on a fair, equal and nondiscriminatory basis. All Members, regardless of their technological sophistication, can enter D-Limit orders and benefit from their protection against latency arbitrage. More specifically, a Member using a D-Limit order would not need to be able to have the technological capability (e.g., through the use of high speed connectivity and market data purchased from other exchanges) to identify that the quote is unstable and send an order message to cancel or reprice its resting order faster than another

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http://nasdaq.cchwallstreet.com/NASDAQTools/PlatformViewer.asp?selectednode=chp%5F1%5F1%5F2%5F2&manual=%2Fnasdaq%2Fmain%2Fnasdaq%2Dllcrules%2F; Cboe BZX U.S. Equities Exchange Fee Schedule, available at https://markets.cboe.com/us/equities/membership/fee_schedule/bzx/.

61 See Wah, Elaine, "Gone in Sixty Seconds" (September 21, 2018) available at: https://medium.com/boxes-and-lines/gone-in-sixty-seconds-22094adeb0de.

Member with such technological capability can trade against the order. The Exchange will adjust the price of a D-Limit order based on the transparent, rule-based CQI formula.

IEX believes the fact that the D-Limit order is specifically designed to disincentivize trading strategies seeking to take liquidity while the CQI is on does not amount to "unfair discrimination between customers, issuers, brokers, or dealers," within the meaning of the Act. The existing equity market structure is replete with examples of exchange rules that seek to incentivize, disincentivize, or deter various types of trading activity. Maker-Taker price structures, which are used by all the largest exchanges, by their nature provide more favorable exchange economics to liquidity-providing compared to liquidity-taking activity. Nasdaq charges "excess order fees" on certain members that have a relatively high ratio of orders entered away from the NBBO to orders that are executed, subject to carve-outs for certain low-volume members and certain registered market makers.[62] Nasdaq justified the fee based on its design to improve the quality of displayed liquidity to the benefit of all market participants.[63]

Further, IEX's CQI Remove Fee is expressly designed to benefit and incentivize the placing of resting, non-displayed orders by limiting the profitability of the same trading strategies that motivate the current proposal. Moreover, IEX's existing speed bump is designed to limit executions of non-displayed, pegged orders before the Exchange has the ability to update and reprice those orders based on its own view of market prices. In approving the speed bump, the Commission found that:

> IEX's [speed bump] is thus narrowly designed to allow IEX to update the prices of non-displayed resting pegged orders so that they can achieve their intended purpose – pricing that is accurately benchmarked to the NBBO…. The Commission thus finds that IEX's ability to update the prices of resting pegged orders…is not designed to unfairly

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62 See Nasdaq General Equity and Options Rule, Equity 7 Section 118(m).

63 See Securities Exchange Act Release No. 66951 (May 9, 2012), 77 FR 28647 (May 15, 2012) (SR-NASDAQ-2012-055).

discriminate among members to the detriment of investors or the public interest and is intended to benefit investors that post pegged orders."[64]

The Exchange believes that it is similarly not unfairly discriminatory to use a narrowly tailored means to provide protection to and encourage the placing of displayed limit orders on IEX by investors and market makers by providing them a measure of protection from the trading strategies documented above. The Exchange further believes that the proposed rule change is consistent with the protection of investors and the public interest because the circumstances under which a D-Limit order will be adjusted are narrowly tailored, transparent and predictable. As discussed above, the CQI is only on for an extremely small percentage of the trading day and is designed to protect impacted order types during these very narrow windows of time. Even if IEX enhances the CQI formula (as noted above), the nature of the CQI will remain intact – it will continue to focus on protecting impacted orders against latency arbitrage trading strategies during very narrow windows of time. Even though D-Limit orders may not be accessible to other market participants during these narrow timeframes, the Exchange does not believe that this impact is unfairly discriminatory because during the vast majority of time D-Limit quotes will be accessible. Moreover, the purpose of limiting such accessibility is to incentivize liquidity providers to post displayed orders on IEX by protecting them as discussed above. To the extent that such incentive is successful, all market participants, including takers of liquidity, will benefit.

The CQI formula used to determine whether and when to adjust an order's price is codified in IEX Rule 11.190(g) and is, on average, on for only 0.007% of the trading day for each security. During the remaining 99.993% of the trading day, D-Limit orders would be

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64 Securities Exchange Act Release No. 78101 (June 17, 2016), 81 FR 41142, 41157 (June 23, 2016).

available to trade at their resting price in the same manner as any other limit order. In contrast, whether an order will be cancelled or adjusted in an exchange with an asymmetrical speed bump would not be transparent or predictable since such changes are determined exclusively by the market participant that entered the order. Further, the price of a D-Limit order would only be adjusted when the CQI formula predicts that the relevant quote is unstable while an asymmetrical speed bump enables a market participant to cancel or adjust the price of an order on an ad hoc basis for any reason and frequency.

Notwithstanding that D-Limit orders will be subject to price adjustment when the CQI is on, IEX believes that this functionality is consistent with the "firm quote" requirements of Regulation NMS Rule 602(b)[65] in that it will not result in a meaningful amount of quote "fading" compared to the quote fading, both explicit and implicit, that exists and is permitted today. This quote fading falls into three broad categories.

First, several other exchanges offer displayed order types that are pegged to the NBBO and thus are subject to price adjustments, including to a less aggressive price as the NBBO changes (i.e., explicit quote fading). EDGA, for example, offers a MidPoint Discretionary order that is pegged to the same-side NBB or NBO with discretion to execute at more aggressive prices up to and including the midpoint of the NBBO or the order's limit price.[66] A MidPoint Discretionary order can be displayed or non-displayed. In the case of a displayed MidPoint Discretionary order, the order's display price is adjusted in response to changes in the NBB (for buy orders) or NBO (for sell orders) which can result in a displayed order being adjusted to a less aggressive price than it was previously displayed at if the NBB or NBO moves to a less aggressive price. Thus, displayed MidPoint Discretionary orders are subject to quote fading if

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65 17 CFR 242.602(b).

66 See EDGA Equity Rule 11.8(e).

the NBB or NBO, as applicable, moves to a less aggressive price. IEX believes that this price adjustment functionality is substantially similar to the proposed D-Limit price adjustment functionality in that both order types will adjust to a less aggressive price in response to certain objective criteria. The displayed price of a MidPoint Discretionary order will move to a less aggressive price if the NBB or NBO moves to a less aggressive price, while the displayed price of a D-Limit order will move to a less aggressive price if IEX's CQI formula predicts that the NBB or NBO is likely to move to a less aggressive price.

EDGA adopted the MidPoint Discretionary order through an immediately effective rule filing.[67] Four years later, EDGA's affiliate, EDGX filed an immediately effective rule filing to adopt a comparable MidPoint Discretionary order type, the displayed version of which is also pegged to the same-side NBB or NBO and thus subject to price adjustments to a less aggressive price when the NBBO moves to such a price.[68] Neither the EDGA nor EDGX rule filings raised any issues or concerns regarding quote fading of displayed MidPoint Discretionary orders. In addition, Nasdaq offers a discretionary order type for which the display price can be pegged to a floating price range[69] and NYSE Arca and NYSE each offers a primary pegged order type that has a working price pegged to the same-side PBBO that must include a minimum of one round

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67 See Securities Exchange Act Release No. 67226 (June 20, 2012), 77 FR 38113 (June 26, 2012) (SR-EDGA-2012-022) (Notice of Filing and Immediate Effectiveness to Amend EDGA Rules to Add the MidPoint Discretionary order). Two years later, in 2014, EDGA filed another rule change proposal to restructure its order type rules, including the MidPoint Discretionary order. See Securities Exchange Act Release No. 73592 (November 13, 2014), 79 FR 68937 (November 19, 2014) (SR-EDGA-2014-020).

68 See Securities Exchange Act Release No. 84327 (October 1, 2018), 83 FR 50416 (October 5, 2018) (SR-CboeEDGX-2018-041).

69 See Nasdaq Rule 4703(g) and Section 3.3.2 of Nasdaq's SUMO FIX Programming Specification for FIX 4.2 available at: https://nasdaqtrader.com/content/technicalsupport/specifications/TradingProducts/fix_orders_sb.pdf.

lot displayed.[70] Thus, these displayed pegged orders will also be adjusted to a less aggressive price when the same-side NBBO or PBBO, as applicable, moves to a less aggressive price. Similarly, the Commission's approval of a Nasdaq rule filing that includes adoption of its displayed discretionary order type does not include any discussion of potential quote fading issues.[71]

Data for September 2019 identified that there were approximately 5,500 volume-weighted average NBBO quote changes per symbol each day to a less aggressive price, compared to 5,427 volume-weighted average CQI determinations per symbol each day. IEX believes that this data evidences that D-Limit orders would be subject to a comparable number of changes to a less aggressive price as order types of other exchanges that peg to the near side NBBO or PBBO. And as discussed earlier, the CQI is on for only 1.64 seconds per symbol per day on average (0.007% of the time during regular market hours). Thus, IEX believes that this data supports that D-Limit, like the other exchanges' order types discussed above, is a narrowly tailored approach to provide for price adjustments to a less aggressive price for displayed orders pursuant to transparent and objective criteria. IEX believes that order types that are subject to repricing in response to an exchange determining that the NBBO has changed provide relevant precedent to repricing based on an exchange determining – pursuant to a transparent formula -- that the NBBO is likely in the process of changing. In both cases, the repricing trigger is based on the NBBO. Although D-Limit orders would be repriced based on a transparent formula predicting an imminent change to the NBBO, rather than an exchange's determination that the NBBO has changed, the formula is narrowly tailored, designed to provide protection to market

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70 See NYSE Arca Rule 7.31-E(h)(2) and NYSE Rule 7.31(h)(2).

71 See Securities Exchange Act Release No. 75252 (June 22, 2015), 80 FR 36865 (June 26, 2015) (SR-NASDAQ-2015-024).

participants at all levels of sophistication, and codified in an IEX rule. And in both cases, the automatic change to the quote's price is explicitly intended to prevent executions at the originally displayed price. While the D-Limit proposal is novel in that it would provide an exchange with flexibility to reprice a displayed order, that flexibility is limited by the narrowly tailored CQI formula which itself is based on publicly available market data inputs and designed to protect liquidity providers from adverse selection by latency arbitrage trading strategies. Although such protection is designed to benefit liquidity providers, IEX believes that it will also benefit liquidity takers to the extent that the protection results in more resting liquidity available to liquidity takers. Consequently, IEX believes that its D-Limit order type proposal is approvable in accordance with this precedent.

Second, explicit quote fading exists on options exchanges, which offer several mechanisms to assist their members in managing risk and avoiding unintended executions. These mechanisms include risk management functionality that will automatically cancel resting orders and quotes based on member configured triggers such as total traded volume, percent traded volume, notional, net Delta or Vega exposure.[72] Notably, the automatic triggers appear to occur inside the exchange matching engine as opposed to requiring an order or cancel message from the member. Other exchanges also offer order and quote purge functionality that is designed to help members manage risk by providing dedicated (and effectively faster) ports to

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[72] See, e.g., NYSE Arca Rule 6.40-O; Nasdaq ISE, LLC Options 3, Section 15(a)(3)(B); Nasdaq GEMX, LCC Options 3, Section 15(a)(3)(B); Nasdaq MRX, LLC Options 3, Section 15(a)(3)(B); Miami International Securities Exchange LLC ("MIAX") Rule 519A; Nasdaq Rule 6130; Market Maker Risk Management Information Sheet for Nasdaq PHLX LLC ("Nasdaq PHLX")/Nasdaq Options Market ("NOM")/Nasdaq BX available at https://www.nasdaq.com/docs/MarketMakerRiskManagement_PHLX_NOM_BX.pdf; and Order Risk Management Information Sheet for Nasdaq PHLX/NOM/Nasdaq BX available at https://www.nasdaq.com/docs/OrderRiskManagement_PHLX_NOM_BX.pdf.

enter mass cancellations of multiple resting orders.[73] While IEX appreciates that market makers and other market participants posting displayed orders on options exchanges face materially greater risks than on equities markets, in view of the enormous number of individual option series available for quoting on options markets, IEX believes that they nonetheless provide relevant precedent for the risk management protections that D-Limit orders would provide. Market participants on both options and equities markets face significant challenges in cancelling or adjusting resting orders during times of market transition, in the face of other market participants engaged in sophisticated latency arbitrage efforts.

Third, an example of implicit quote fading is the manner in which other exchanges offer expensive, high-speed proprietary market data feeds and connectivity products that sophisticated market participants can leverage (along with predictive strategies) to not only target resting orders at unstable prices but to cancel or adjust resting orders more quickly than market participants not using such products and strategies can access their resting orders. As a result, when the market for a particular security is in transition, these sophisticated market participants are often able to cancel resting orders before less sophisticated market participants can access them.[74]

Thus, the Exchange believes that D-Limit orders will operate in a manner consistent with

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73 See "CBOE Purge Ports Frequently Asked Questions" available at https://cdn.cboe.com/resources/features/Cboe_USO_PurgePortsFAQs.pdf and MIAX Rule 519C.

74 See, e.g., Malinova, Katya and Park, Andreas, "Does High Frequency Trading Add Noise to Prices?" (April 17, 2017) at 5, available at https://www.rsm.nl/fileadmin/home/Department_of_Finance__VG5_/LQ2017/Malinova__Katya.pdf ("When someone trades against their quotes on one venue, market makers rush to cancel their quotes on the other venue; if the market maker is very fast, it may be able to cancel the other quote before portions of a presumed multi-market order reach the other venue.").

the "firm quote" requirements of Regulation NMS Rule 602(b)[75] and with existing order types, practices and precedent for protected quotations under the Order Protection Rule, as discussed above. D-Limit orders will be subject to execution at their ranked and displayed price (if displayable) at the time an incoming order reaches the Exchange for execution against the D-Limit order. Any price adjustment that occurs must occur before that point in time. This is similar to the EDGA displayed MidPoint Discretionary order type, which is subject to price adjustment to a less aggressive displayed price in response to NBBO changes. As a result, a displayed MidPoint Discretionary order may not be available for execution at its previously displayed price by the time an incoming order reaches the exchange for execution. Although a D-Limit displayed order would be adjusted to a less aggressive price than the NBBO, while a MidPoint Discretionary order will be adjusted to a less aggressive price that has become the same-side NBBO, in both cases the order is no longer available for execution at its previously displayed price. Further, options exchanges cancel quotes and displayed orders as a result of automated risk management functionality or enable cancellation through faster purge ports. In those situations, an order or quote that was previously displayed may not be available for execution by the time an incoming order reaches the exchange engine for execution. Moreover, all resting displayed orders may be unavailable in the event that another order or a cancel message is actionable prior to an incoming order reaching the engine, particularly when targeted by a sophisticated market participant engaged in latency arbitrage. And, as noted above, D-Limit orders will only be subject to price adjustment on average for 0.007% of the trading day, while the frequency of order cancellation or non-availability attributable to the existing exchange mechanisms and practices is determined by each market participant and not subject to any

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75 See supra note 65.

transparent limitations.

Further, IEX believes that displayed D-Limit orders would clearly qualify as "automated quotations" and therefore "protected quotations" under Regulation NMS, as discussed in the Purpose section. This conclusion is supported by two key considerations. First, IEX will not impose any delay on orders seeking to access D-Limit quotations beyond that which the Commission has already approved as consistent with the requirements for "automated quotations." Second, adjusting prices of D-Limit displayed orders when the CQI is on is consistent with well-established precedent allowing other exchanges to automatically adjust the prices of protected quotations based on changes in overall market prices.

Under Rule 611 of Regulation NMS,[76] "trade-through" protections are extended to each protected bid or offer, which is defined in relevant part as "an automated quotation that is the best bid or best offer of a national securities exchange."[77] The term "automated quotation" is defined as one that permits an incoming order to be marked as immediate-or-cancel ("IOC") and that "immediately and automatically" executes an IOC order against the displayed quotation up to its full size, cancels any unexecuted portion, transmits to the sender a message indicating the action taken, and updates the quotation to reflect a change to its material terms.[78]

In approving IEX's exchange application, in response to arguments that federal securities regulations did not permit exchanges to impose any intentional delay, however small, on access to protected quotations, the Commission determined that IEX's 350 microsecond "speed bump," which is applied to incoming and outbound messages, is "well within the range of geographic and technological latencies that market participants experience today" and therefore is

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76 17 CFR 242.611.

77 17 CFR 242.600(b)(61)(iii).

78 17 CFR 242.600(b)(4).

"comparable to – and even less than – delays attributable to other markets that currently are included in the NBBO."[79] The Commission thus concluded that, because IEX's speed bump is de minimis, its displayed quotes were immediately accessible and entitled to protected quotation status.[80]

Access to D-Limit quotes will not be subject to any delay beyond that to which all IEX's orders, displayed and non-displayed, are now subject. Accordingly, all D-Limit quotes will be immediately accessible under Regulation NMS.

Moreover, based on precedent, the fact that D-Limit displayed orders are subject to automatic repricing based on changes in market prices does not affect their status as protected quotations. For example, as discussed above, EDGA has an approved Midpoint Discretionary Order, which allows members to post displayed or non-displayed liquidity at the NBBO with discretion to execute at prices extending to and including the NBBO midpoint.[81] This EDGA order type automatically reprices the order based on changes in the NBBO (including to a less aggressive price), which benefits market participants that use the order type by helping to assure they are not executed at "stale" prices as well as to provide an opportunity for those orders to execute at a more aggressive NBBO when prices move in that direction. Similarly, various exchanges, including IEX, have received approval for "market maker peg" order types, which automatically reprice orders to allow market makers to meet their quoting obligations on those exchanges by automatically repricing those orders to within a designated percentage away from the NBBO.[82]

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79 See note 64 supra at 41161.

80 See note 64 supra at 41162.

81 See note 66 supra.

82 See, e.g., IEX Rule 11.190(b)(13); Cboe BZX Rule 11.9(c)(15); Nasdaq Rule 4702(b)(7).

All these order types allow an exchange to automatically reprice resting orders based on determinations by the individual exchanges, in reading price updates from all exchanges, that the NBBO has changed. With respect to the automated quotation definition, a participant seeking to access a Midpoint Discretionary Order or market maker peg order displayed at any one time may fail to execute at that price if the order has been repriced by the exchange in the time between the transmission of the order and its receipt and processing by the exchange's systems. The potential that this will occur depends on various factors, including, among others, the distance between the point where the sender transmits the order to the exchange's systems and how quickly those systems update their understanding of the NBBO relative to the speed at which they process orders to take liquidity.

Because the use of a de minimis delay does not affect the ability of a displayed order to qualify as a protected quotation, there is no reason it should lose that status because its price is adjusted automatically by the exchange in response to changes in the NBBO, as is the case with the EDGA Midpoint Discretionary Order or the Nasdaq displayed discretionary order. IEX does not believe that there are any material differences in this regard between repricing that occurs in response to an exchange determining the NBBO has changed, and repricing based on an exchange determining – pursuant to a transparent formula -- that the NBBO is likely in the process of changing. In either case, the automatic change to the quote's price is explicitly intended to prevent executions at the originally displayed price.

D-Limit orders are differentiated because they are explicitly designed to prevent executions in small time increments when the CQI is on. While this functionality discriminates against the use of trading strategies with more complete and timely information about market prices that intentionally seek to trade against resting orders during these time periods at stale

prices, IEX believes that the D-Limit functionality is not unfairly discriminatory within the meaning of the Act because it is a narrowly tailored means of protecting, and thereby encouraging the use of, displayed quotations by both investors and market makers. Moreover, for the reasons discussed in the Purpose section, the Exchange believes that the proposed D-Limit order type may result in market participants entering more displayed and other resting limit orders on IEX, and at more aggressive prices, sizes and duration, which would benefit all market participants and thereby further the purposes of the Act.

Further, IEX believes that the specified order attributes for D-Limit orders are consistent with the Act because they are structured to facilitate efficient execution of D-Limit orders in a manner consistent with existing functionality and order types.

Additionally, IEX believes that the proposal is consistent with protection of investors and the public interest in that the D-Limit order type is designed to assist Members in obtaining best execution for their customers by providing an opportunity to execute at the NBBO, but limiting executions at the NBBO when the NBBO appears to be unstable, thereby reducing the potential to execute at an imminently stale price.

In conclusion, IEX believes that the proposed new D-Limit order type is consistent with the protection of investors and the public interest purposes of the Act in that it is designed to protect liquidity providers from certain adverse impacts of latency arbitrage strategies, and thereby incentivize the entry of additional resting orders, including displayed orders on the Exchange, thus enhancing price discovery and the overall liquidity profile on the Exchange to the benefit of all market participants.

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

IEX 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. To the contrary, the proposal is designed to enhance IEX's competitiveness by incentivizing the entry of increased liquidity. With regards to inter-market competition, other exchanges are free to adopt similar order types to the extent that the proposed changes pose a competitive threat to their business. In this regard, the Exchange notes that NYSE American LLC ("NYSE Amex") previously adopted a rule copying an earlier iteration of the Exchange's Discretionary Peg order type and quote stability calculation.[83]

In addition, the Exchange believes that the proposed rule change will enhance its ability to compete with alternative trading systems ("ATSs"). In this regard, IEX believes that a meaningful segment of market participants choose to rest orders on non-displayed ATSs in order to obtain protection from latency arbitrage strategies. As opposed to exchanges, ATSs can be structured to enable counter-party selection so that participants can choose to avoid interacting with certain counterparties deemed to be undesirable.[84] The Exchange believes that counter-party selection is important to some of these market participants, in part to avoid being subject to adverse latency arbitrage. While the proposed rule change will not enable counter-party selection, IEX believes that to the degree it is successful in reducing the impact of latency arbitrage strategies targeting resting orders at stale prices, it may reduce the need for counter-party selection and thereby incentivize such market participants to post displayed and other limit orders on IEX. Accordingly, the Exchange also believes that the proposed rule change will not result in any burden on inter-market competition that is not necessary or appropriate in furtherance of the purposes of the Act.

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83 See NYSE Amex Rule 7.31E(h)(3)(D).

84 See Securities Exchange Act Release No. 83663 (July 18, 2018), 83 FR 38768, 38853 (August 7, 2018).

With regards to intra-market competition, D-Limit orders will be available to all Members on a fair, impartial and nondiscriminatory basis. While the proposed rule change is designed to provide certain protections to limit orders, all Members are eligible to enter D-Limit orders on the same terms and the protections will be available to all Members on the same terms. Moreover, the Exchange does not believe that the proposed change will result in any burden on Members seeking to cross the spread and execute at the far side quote (the NBO (NBB) for buy (sell) orders) or to Members seeking to conduct a market wide sweep with intermarket sweep orders. D-Limit orders will only be subject to potential adjustment for an extremely small percentage of the trading day and the rest of the time will be available for execution, if consistent with the order's limit price, at the far side quote. To the extent that a D-Limit order is adjusted to a less aggressive price while a Member is seeking to access the full displayed size of the order at the prior more aggressive price with an intermarket sweep order, the Member would be permitted to trade-through the D-Limit order at the more aggressive price pursuant to Rule 611(b)(6) of Regulation NMS.[85] Moreover, the proposed change would provide potential benefits to such Members to the extent there is more liquidity available on IEX as a result of the protections provided to users of D-Limit orders. As discussed above, the protections offered by the D-Limit order type, as proposed, are intended in part to incentivize additional resting limit orders to be entered on the Exchange, which would provide additional available liquidity to all Members

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85 Regulation NMS Rule 611(b)(6) provides an exception to its trade-through requirements if the transaction that constituted the trade-through was effected by a trading center that simultaneously routed an intermarket sweep order to execute against the full displayed size of any protected quotation in the NMS stock that was traded through. See 17 CFR 242.611(b); see also Question 4.06 in "Responses to Frequently Asked Questions Concerning Rule 611 and 610 of Regulation NMS" (April 4, 2008), available at https://www.sec.gov/divisions/marketreg/nmsfaq610-11.htm.

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

Written comments were neither solicited nor 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 up to 90 days (i) as the Commission may designate 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-IEX-2019-15 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-IEX-2019-15. 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-IEX-2019-15, and should be submitted on or before [INSERT DATE 21 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[86]

J. Matthew DeLesDernier,
Assistant Secretary.

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86 17 CFR 200.30-3(a)(12).

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