Required fields are shown with yellow backgrounds and asterisks.

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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
Form 19b-4

File No.* SR - 2017 - * 74

Amendment No. (req. for Amendments *)

Filing by   NASDAQ PHLX LLC

Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

| Initial * ☑ | Amendment * ☐ | Withdrawal ☐ | Section 19(b)(2) * ☑ | Section 19(b)(3)(A) * ☐ | Section 19(b)(3)(B) * ☐ |

Rule

Pilot ☐	Extension of Time Period for Commission Action * ☐	Date Expires *		19b-4(f)(1) ▣ 19b-4(f)(4) ▣
				19b-4(f)(2) ▣ 19b-4(f)(5) ▣
				19b-4(f)(3) ▣ 19b-4(f)(6) ▣

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010

Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934

Section 806(e)(1) * ☐   Section 806(e)(2) * ☐   Section 3C(b)(2) * ☐

Exhibit 2 Sent As Paper Document ▣   Exhibit 3 Sent As Paper Document ▣

Description

Provide a brief description of the action (limit 250 characters, required when Initial is checked *).

Proposal to introduce the Intellicator Analytic Tool, a new market data product designed to analyze options market transactions and synthesize that analysis to assist investors in assessing the equities underlying those transactions.

Contact Information

Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.

First Name * Daniel   Last Name * Cantu

Title * Associate General Counsel

E-mail * Daniel.Cantu@nasdaq.com

Telephone * (301) 978-8469   Fax

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934,

has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized.

(Title *)

Date   09/12/2017

By   Edward S. Knight

(Name *)

Executive Vice President and General Counsel

edward.knight@nasdaq.com

NOTE: Clicking the button at right will digitally sign and lock this form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFS website.

Form 19b-4 Information *

Add Remove View

The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act.

Exhibit 1 - Notice of Proposed Rule Change *

Add Remove View

The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 1A- Notice of Proposed Rule Change, Security-Based Swap Submission, or Advance Notice by Clearing Agencies *

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change, security-based swap submission, or advance notice being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 2 - Notices, Written Comments, Transcripts, Other Communications

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Exhibit Sent As Paper Document
☐

Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.

Exhibit 3 - Form, Report, or Questionnaire

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Exhibit Sent As Paper Document
☐

Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.

Exhibit 4 - Marked Copies

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The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.

Exhibit 5 - Proposed Rule Text

Add Remove View

The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change.

Partial Amendment

Add Remove View

If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.

1.   Text of the Proposed Rule Change

        (a)   NASDAQ PHLX LLC ("Phlx" or "Exchange"), pursuant to Section

19(b)(1) of the Securities Exchange Act of 1934 ("Act")[1] and Rule 19b-4 thereunder,[2] is

filing with the Securities and Exchange Commission ("SEC" or "Commission") a

proposal to introduce the Intellicator Analytic Tool, a new market data product designed

to analyze options market transactions and synthesize that analysis to assist investors in

assessing the equities underlying those transactions.

        The Exchange has designated this filing to be operative on October 23, 2017, if

approved by the Commission.

        A notice of the proposed rule change for publication in the Federal Register is

attached as Exhibit 1. The text of the proposed rule change is attached as Exhibit 5.

        (b)   Not applicable.

        (c)   Not applicable.

2.   Procedures of the Self-Regulatory Organization

        The Board of Directors of the Exchange approved the submission of this proposed

rule change on August 2, 2017. No other action by the Exchange is necessary for the

filing of the rule change.

        Questions and comments on the proposed rule change may be directed to:

                            Daniel A. Cantu
                          Associate General Counsel
                              Nasdaq, Inc.
                              (301) 978-8469

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

[2]   17 CFR 240.19b-4.

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

        a.   Purpose

The purpose of the proposed rule change is to introduce the Intellicator Analytic

Tool, a new, optional market data product available for a corresponding fee[3] that is

designed to analyze options market transactions and synthesize that analysis to assist

investors in assessing the equities underlying those transactions.[4]

Options market transactions can be complex; the purpose of the Intellicator

Analytic Tool is to distill options data into a form that will help investors understand

options market movements and provide them with actionable insight in changing market

conditions. The Intellicator Analytic Tool will offer three increasingly sophisticated

levels of analysis. The first level, the Single-Factor Analytic Bundle, calculates

fundamental measures, or "factors," of options market activity—Put/Call Ratio,

Moneyness Ratio, Volume-Weighted Average Delta, and Weighted Average Strike

Price—and applies those factors to certain segments of activity on the Exchange. The

second level, the Single-Factor Intellicator, uses machine learning—an analytical

technique that employs algorithms that iteratively "learn" from data to find hidden

insights without explicit programming—to summarize in a single numeral the

information contained within a Single-Factor Analytic Bundle. The third level, the

Multi-Factor Intellicator, uses machine learning to summarize in a single numeral all of

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[3]   A separate filing will address the pricing for the Intellicator Analytic Tool, which
        will also be implemented on October 23, 2017, if approved by the Commission.

[4]   The Exchange initially filed the proposed changes on August 2, 2017 (SR-Phlx
        2017-62). On August 11, 2017, the Exchange withdrew that filing.

the information contained within all of the five Single-Factor Analytic Bundles offered with this product.

The Exchange will propose, in a forthcoming fee filing, separate fees for the Single-Factor Analytic Bundle, the Single-Factor Intellicator, and the Multi-Factor Intellicator, as well as special rates for the purchase of any combination of these, to allow investors to choose the tool that best fits their needs. The Single-Factor Analytic Bundles are designed to be used by sophisticated investors to supplement, test and inform their own analytic models. The Single- and Multi-Factor Intellicators are designed for the use of investors who seek to understand market sentiment without undertaking complex calculations. Although tailored for different audiences, the Analytic Bundles and Single- and Multi-Factor Intellicators are all designed to increase visibility into options transactions and democratize information to provide the benefits of sophisticated analytical techniques to firms without the technology, staff or wherewithal to conduct a comparable analysis on their own.

The Analytic Bundles and Single- and Multi-Factor Intellicators are described in further detail below.

Single-Factor Analytic Bundle

A Single-Factor Analytic Bundle is a set of calculations of "factors," or standard measures of options market activity, often used as indicia of market sentiment. The Intellicator Analytic Tool will calculate four factors—Put/Call Ratio, Moneyness Ratio,

Volume-Weighted Average Delta, and Weighted Average Stock Price—defined as

follows:[5]

> (i)   Put/Call Ratio: The total number of put contracts traded divided by the
>
>   total number of put and call contracts traded within the prior 60 seconds
>
>   for each underlying symbol.
>
> (ii)   Moneyness Ratio: The natural log of the ratio of the price of the
>
>   underlying equity to the strike price of the options contract traded within
>
>   the prior 60 seconds.[6]
>
> (iii)   Volume-Weighted Average Delta: A calculation of the projected change
>
>   to an option price given a $1 change in the equity price, weighted by the
>
>   number of contracts traded within the prior 60 seconds.
>
> (iv)   Weighted Average Strike Price: A calculation of the strike price of the
>
>   options contracts traded within the prior 60 seconds, weighted by the
>
>   number of days to expiration.[7]

Each of these Single-Factor Analytic Bundles will provide separate calculations

of a specific factor for between five and fifty different segments, or subsets, of the

options market.[8] Segments may be simple or complex. A simple segment may be all

transactions with a certain range of expiration dates. Examples of complex segments

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[5]   The Exchange may introduce new factors that are found to have value in
        assessing market sentiment, but will submit a new filing for approval if other
        factors are added.

[6]   The ratios for calls are multiplied by 1, while ratios for puts are multiplied by -1.

[7]   A higher weighting is given to contracts near expiration.

[8]   Factor calculations for specific segments of the market will not be sold by the
        Exchange separately from the Analytic Bundles.

include: "Customers[9] who buy to open a new position," "Non-Customers[10] who sell to close an existing position," or "Market Makers[11] engaging in complex orders." Segments will be segregated using the following nine fields of information, either alone or in combination: (i) put vs. call; (ii) expiration date; (iii) customer type; (iv) "moneyness"; (v) open vs. close; (vi) buy vs. sell; (vii) order type; (viii) add vs. remove liquidity; and (ix) electronic vs. manual transaction. These fields are defined as follows:

(i)   Put vs. Call: whether the instrument is a put (an option to sell assets at an agreed upon price on or before a particular date) or a call (an option to buy assets at an agreed-upon price on or before a particular date).

(ii)   Expiration date: the number of days to contract expiration. Transactions are assigned to one of five ranges: one week (less than or equal to 7 days prior to expiration); one month (greater than 7 days but less than or equal to 30 days); three months (greater than 30 days but less than or equal to 90 days to expiration); six months (greater than 90 days but less than or equal to 180 days to expiration date; and over six months (greater than 180 days to expiration date).

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9   The term "Customer" applies to any transaction that is identified by a member or member organization for clearing in the Customer range at The Options Clearing Corporation ("OCC") which is not for the account of a broker or dealer or for the account of a "Professional" (as that term is defined in Rule 1000(b)(14)).

10   A "Non-Customer" is any market participant other than a Customer or a Market Maker, such as Professional Customer, Firm, Broker-Dealer, or Joint Back Office (see notes 11-15).

11   "Market Makers" includes Specialists (see Exchange Rule 1020(a)), Registered Option Traders (see Exchange Rule 1014(b)), Streaming Quote Traders (see Exchange Rule 1014(b)(ii)(A)), and Remote Streaming Quote Traders (see Exchange Rule in 1014(b)(ii)(B)).

      (iii)   Customer type: Customer, Professional Customer,[12] Firm,[13] Broker-Dealer,[14] Market Maker, Joint Back Office ("JBO"),[15] off-floor broker-dealer), or Non-Customer.

      (iv)   "Moneyness": In-the-money,[16] out-the-money[17] or at-the-money.[18]

      (v)   Open vs. Close: Whether the transaction is opening a new position or closing an existing position.

      (vi)   Buy vs. Sell.

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[12]   The term "Professional Customer" applies to transactions for the accounts of Professionals, as defined in Exchange Rule 1000(b)(14).

[13]   The term "Firm" applies to any transaction that is identified by a member or member organization for clearing in the Firm range at the OCC.

[14]   The term "Broker-Dealer" applies to any transaction which is not subject to any of the other transaction fees applicable within a particular category.

[15]   The term "Joint Back Office" or "JBO" applies to any transaction that is identified by a member or member organization for clearing in the Firm range at OCC and is identified with an origin code as a JBO. A JBO participant is a member, member organization or non-member organization that maintains a JBO arrangement with a clearing broker-dealer ("JBO Broker") subject to the requirements of Regulation T, Section 220.7 of the Federal Reserve System as discussed at Exchange Rule 703.

[16]   An options contract is in-the-money when the strike price is below 2.5% of the price of the underlying security for a call contract, or above 2.5% of the underlying security for a put contract.

[17]   An options contract is out-the-money when the strike price is above 2.5% of the price of the underlying security for a call contract, or below 2.5% of the underlying security for a put contract.

[18]   An options contract is at-the-money when the strike price is within 2.5% of the price of the underlying security, either above or below, for either a call or a put contract.

(vii)   Execution type: simple order,[19] complex order,[20] price improvement

("PIXL") Order,[21] qualified contingent cross ("QCC"),[22] Sweep,[23]

responder to an auction, or quote from a Market Maker).

(viii)   Add vs. remove liquidity: whether the transaction adds or removes

liquidity, or has no effect on liquidity.

(ix)   Electronic vs. manual: whether the transaction takes place on the floor of

the Exchange or through the electronic order system.

Seven of these nine data fields—put vs. call; expiration date; customer type;

"moneyness"; open vs. close; buy vs. sell; and order type—are currently available in real

time for purchasers of the PHLX Orders data feed, although that feed does not include

order information on Immediate or Cancel Orders ("IOCs") or orders that are fully

executable upon receipt. IOCs and orders that are fully executable upon receipt will,

however, be used to segregate data for factor calculations in Single-Factor Analytic

Bundles. The last two data fields listed above—add vs. remove liquidity and electronic

vs. manual transactions—are not available on any of the Exchange's data feeds, but, like

data from IOCs and fully executable orders upon receipt, will be used to segregate data

into segments for Single-Factor Analytic Bundles.

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[19]   A single-leg option order.

[20]   A multi-legged option order.

[21]   A two-sided order that is entered into a price improvement auction.

[22]   A stock-tied option order consisting of a minimum of 1,000 options contracts
         bundled together for the purpose of crossing the order.

[23]   An order type used to accumulate a position quickly by simultaneously sending
         the order to multiple exchanges.

A purchaser of Single-Factor Analytic Bundles may, under certain circumstances, be able to reverse-engineer factor calculations to obtain transaction-specific information not otherwise available on the Exchange's data feeds.[24] For example, an investor observing a thinly-traded stock may be able to use the Single-Factor Analytic Bundle calculations to determine the type of customer (Customer, Professional Customer, Firm, Broker-Dealer, etc.) adding or removing liquidity—information not otherwise available on the Exchange's data feeds, as noted above.[25] Such information may be useful in identifying the investment strategies of particular customer categories.

While this type of reverse-engineering is not the primary purpose of the Intellicator Analytic Tool—and of limited usefulness given that implementation would only be practical for thinly-traded stocks—it is consistent with the purpose of the Intellicator Analytic Tool to make data about market sentiment available to investors. Identifying the investment strategies of particular customer categories can provide an investor with useful insight into market activity, which this Tool may render more broadly available to investors. Such dissemination of market information promotes transparency and increases market efficiency, and, as stated in the Statutory Basis discussion below, protects protect investors and the public interest.

The data fields identified above will be used to segregate the market into segments by calculating factors only for transactions that meet specific criteria. Each

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[24]   Similar reverse-engineering would be impossible for customers who purchase Intellicators alone, because such segment-specific information will not be provided to customers who only purchase Intellicators.

[25]   There may be other examples in which Single-Feed Analytic Bundles may be used to adduce transaction-specific information not provided in data feeds. For instance, it may also be possible to determine whether a thinly-traded stock were traded through an electronic or manual trade.

segment will be defined by between one and five fields; data from other fields will not be used. By way of illustration, the three complex segments set forth above—"Customers who buy to open a new position," "Non-Customers who sell to close an existing position," and "Market Makers engaging in complex orders"—will be constructed using only three segments, as shown in the following chart:

	Customers who buy to open a position	Non-Customers who sell to close an existing position	Market Makers engaging in complex orders
Put vs. Call[26]	N/A	N/A	N/A
Expiration Date	N/A	N/A	N/A
Customer type	Customer	Non-Customer	Market Maker
Moneyness	N/A	N/A	N/A
Open vs. Close	Open	Close	N/A
Buy vs. Sell	Buy	Sell	N/A
Execution type	N/A	N/A	Complex order
Add vs. remove liquidity[27]	N/A	N/A	N/A
Electronic vs. manual	N/A	N/A	N/A

Purchasers of this product will be provided the results of factor calculations for segments of the market to be identified by the Exchange as indicative of market sentiment. All of the output of the Intellicator Analytic Tool consists solely of calculations, not raw data. The Tool is intended to provide insight into market sentiment through aggregated calculations, not to provide real-time transaction- and order-related information similar to a data feed.

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[26]   As noted above, the first seven fields listed in this chart (from "Put vs. Call" through "Execution type") are available in real time for purchasers of the PHLX Orders data feed, but that data feed does not include data from IOCs or orders that are fully executable upon receipt.

[27]   As noted above, the "add vs. remove liquidity" and "electronic vs. manual" fields are not available on any of the Exchange's proprietary data feeds.

The Exchange expects that segments will change over time. The first iteration of the Intellicator Analytic Tool will utilize a set of segments determined to be indicative of market sentiment based on experience and economic theory, but then will use machine learning—algorithms that test theory against market experience—to improve calculations by identifying additional segments with a strong relationship with the underlying equity and adding them to the Analytic Bundles to create the most robust set of calculations possible. Identifying relevant segments is a feature of this product, and the intellectual property of the Exchange.

Segments will be selected for their ability to provide a robust view of market sentiment. While any single segment may be of limited usefulness on its own, making the same calculations repeatedly for an array of different segments will provide a more reliable and consistent indicia of market sentiment. Providing customers with calculations of the same factor for multiple segments allows them to evaluate market sentiment by comparing calculations across segments. For example, market sentiment related to simple orders may be compared to that of complex orders; calculations for options contracts with less than 7 days to expiration may be compared to those with less than 30 days to expiration; or calculations for options contracts that are in-the-money may be compared to those that are out-the-money or at-the-money. The goal of all of these comparisons is to glean information from differences in market activity that may provide useful information about market sentiment regarding the associated underlying equity.

Calculations will be based on "rolling aggregates" of trading data, updated every 60 seconds over the course of the day.

Single-Factor Intellicators

A Single-Factor Intellicator uses machine learning to summarize in a single numeral the information contained within a Single-Factor Analytic Bundle. The number will be within a set range—possibly between one and one hundred, although the precise range may change over time—and will be designed to value market sentiment: specifically, the upward or downward pressure on the price of an equity instrument as reflected in options trading activity. The numeral will be a sort of "barometer" of trading activity that, in conjunction with other market information, will help investors make informed decisions.

The Single-Factor Intellicator will serve a different purpose than the Analytic Bundles. Whereas the Analytic Bundles are designed to provide raw calculations, the Intellicators are designed to provide an analytical overlay to those calculations to help investors interpret market sentiment. As was the case with the Analytic Bundles, nothing in the Single-Factor Intellicator can be used to glean transaction-specific information.

The calculation for the Single-Factor Intellicator will change over time, as machine learning algorithms use data to learn about the relationship between options and equities, and modify the calculation accordingly. Specifically, the Exchange will use calculated values from the Analytic Bundle to improve mathematical models of the relationship between certain options trades and the equities underlying those trades. Over time, the algorithm will optimize these equations for both the types of data used to analyze equities and the weight of such data. The result will be a better mathematical model.

Calculations for Single-Factor Intellicators, like calculations for each factor, will be updated every 60 seconds over the course of the day.

Multi-Factor Intellicator

The Multi-Factor Intellicator uses machine learning to summarize in a single numeral all of the calculations contained in all of the five Single-Factor Analytic Bundles. As was the case with Single-Factor Intellicators, the Multi-Factor Intellicator is designed to act as a "barometer" of options trading activity, which the customer will be able to incorporate into its market analysis. The Multi-Factor Intellicator will improve over time through machine learning.

The Multi-Factor Intellicator will also be updated every 60 seconds over the course of the day.

Proposed Pricing Structure

As previously noted, the fee schedule for the Intellicator Analytic Tool will be included in a future filing. Because the Single-Factor Analytic Bundles, Single-Factor Intellicators, and Multi-Factor Intellicators may prove useful for different audiences, these components of the Intellicator Analytic Tool will be priced separately.

b.   Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[28] in general, and furthers the objectives of Section 6(b)(5)[29] of the Act in particular. The proposal 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 by prompting transparency and increasing visibility into options transactions and democratizing

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[28]   15 U.S.C. 78f(b).

[29]   15 U.S.C. 78f(b)(5).

information to provide the benefits of sophisticated analytical techniques to firms without

the technology, staff or wherewithal to conduct a comparable analysis on their own.

Specifically, the Single- and Multi-Factor Intellicators will provide all investors with

insight into market sentiment otherwise available only to those investors with the

technology, staff and wherewithal to conduct such an analysis. To the extent that the

Intellicator Analytic Tool uses information not otherwise available on the Exchange's

market data feeds, the effect of using such information as an input for the Tool is to make

information more widely available to investors. To the degree that investors use Single-

Factor Analytic Bundles to reverse-engineer certain factor calculations to obtain

transaction-specific information not otherwise provided on the Exchange's data feeds, the

availability of such information promotes transparency and increases market efficiency,

thereby protecting investors and the public interest. The net effect is to make information

on market sentiment more readily available to more investors, thereby removing

impediments to a free and open market and promoting just and equitable principles of

trade.

In adopting Regulation NMS,[30] the Commission granted SROs and broker-dealers

increased authority and flexibility to offer new and unique market data to the public. It

was believed that this authority would expand the amount of data available to consumers,

and also spur innovation and competition for the provision of market data. The

Intellicator Analytic Tool—a new market data product designed to analyze options

market transactions and synthesize that analysis to help investors assess the equities

underlying those transactions—is the type of market data product that the Commission

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[30]   See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496
         (June 29, 2005) ("Regulation NMS Adopting Release").

envisioned when it adopted regulation NMS. The Commission concluded that

Regulation NMS—deregulating the market in proprietary data—would further the Act's

goals of facilitating efficiency and competition:

> [E]fficiency is promoted when broker-dealers who do not need the data
> beyond the prices, sizes, market center identifications of the NBBO and
> consolidated last sale information are not required to receive (and pay for)
> such data. The Commission also believes that efficiency is promoted when
> broker-dealers may choose to receive (and pay for) additional market data
> based on their own internal analysis of the need for such data.[31]

By removing unnecessary regulatory restrictions on the ability of exchanges to

sell their own data, Regulation NMS advanced the goals of the Act and the principles

reflected in its legislative history.

In NetCoalition v. Securities and Exchange Commission[32] ("NetCoalition") the

D.C. Circuit upheld the Commission's use of a market-based approach in evaluating the

fairness of market data fees against a challenge claiming that Congress mandated a cost-

based approach.[33] As the court emphasized, the Commission "intended in Regulation

NMS that 'market forces, rather than regulatory requirements' play a role in determining

the market data . . . to be made available to investors and at what cost."[34] "No one

disputes that competition for order flow is 'fierce.' … As the SEC explained, '[i]n the

U.S. national market system, buyers and sellers of securities, and the broker-dealers that

act as their order-routing agents, have a wide range of choices of where to route orders

for execution'; [and] 'no exchange can afford to take its market share percentages for

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[31]   Id.

[32]   See NetCoalition v. SEC, 615 F.3d 525 (D.C. Cir. 2010).

[33]   Id. at 534 - 535.

[34]   Id. at 537.

granted' because 'no exchange possesses a monopoly, regulatory or otherwise, in the

execution of order flow from broker dealers'….".[35]

Data products such as the Intellicator Analytic Tool are a means by which

exchanges compete to attract order flow. To the extent that exchanges are successful in

such competition, they earn trading revenues and also enhance the value of their data

products by increasing the amount of data they provide. The need to compete for order

flow places substantial pressure upon exchanges to keep their fees for both executions

and data reasonable.[36]

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

The Exchange does not believe that the proposed rule change will impose any

burden on competition not necessary or appropriate in furtherance of the purposes of the

Act. Indeed, the Exchange believes that the Intellicator Analytic Tool enhances

competition by increasing transparency into options transactions and democratizing

information to provide the benefits of sophisticated analytical techniques to firms without

the technology, staff or wherewithal to conduct a comparable analysis on their own.

Many firms produce internal analytic models to assess market sentiment similar to the

Intellicator Analytic Tool; the introduction of this Tool will increase competition by

making such models available to more investors.

The market for data products is extremely competitive and firms may freely

choose alternative venues and data vendors based on the aggregate fees assessed, the data

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[35]   Id. at 539 (quoting Securities Exchange Act Release No. 59039 (December 2,
         2008), 73 FR 74770, 74782-83 (December 9, 2008) (SR-NYSEArca-2006-21)).

[36]   See Sec. Indus. Fin. Mkts. Ass'n (SIFMA), Initial Decision Release No. 1015,
         2016 SEC LEXIS 2278 (ALJ June 1, 2016) (finding the existence of vigorous
         competition with respect to non-core market data).

offered, and the value provided. Numerous exchanges compete with each other for listings, trades, and market data itself, providing virtually limitless opportunities for entrepreneurs who wish to produce and distribute their own market data. Transaction execution and proprietary data products are complementary in that market data is both an input and a byproduct of the execution service. In fact, market data and trade execution are a paradigmatic example of joint products with joint costs. The decision whether and on which platform to post an order will depend on the attributes of the platform where the order can be posted, including the execution fees, data quality and price. Without trade executions, exchange data products cannot exist. Moreover, data products, including the Intellicator Analytic Tool, are valuable to many end users only insofar as they provide information that end users expect will assist them or their customers in making trading decisions.

The costs of producing market data include not only the costs of the data distribution infrastructure, but also the costs of designing, maintaining, and operating the exchange's transaction execution platform and the cost of regulating the exchange to ensure its fair operation and maintain investor confidence. The total return that a trading platform earns reflects the revenues it receives from both products and the joint costs it incurs. Moreover, the operation of the exchange is characterized by high fixed costs and low marginal costs. This cost structure is common in content distribution industries such as software, where developing new software typically requires a large initial investment (and continuing large investments to upgrade the software), but once the software is developed, the incremental cost of providing that software to an additional user is typically small, or even zero (e.g., if the software can be downloaded over the internet

after being purchased).[37] It is costly to build and maintain a trading platform, but the

incremental cost of trading each additional share on an existing platform, or of

distributing an additional instance of data, is very low. Market information and

executions are each produced jointly (in the sense that the activities of trading and

placing orders are the source of the information that is distributed) and are each subject to

significant scale economies.

Competition among trading platforms can be expected to constrain the aggregate

return each platform earns from the sale of its joint products. The level of competition

and contestability in the market is evident in the numerous alternative venues that

compete for order flow, including SRO markets, as well as internalizing BDs and various

forms of alternative trading systems ("ATSs"), including dark pools and electronic

communication networks ("ECNs"). Each SRO market competes to produce transaction

reports via trade executions, and two FINRA-regulated TRFs compete to attract

internalized transaction reports. It is common for BDs to further and exploit this

competition by sending their order flow and transaction reports to multiple markets,

rather than providing them all to a single market. Competitive markets for order flow,

executions, and transaction reports provide pricing discipline for the inputs of proprietary

data products. The large number of SROs, TRFs, BDs, and ATSs that currently produce

proprietary data or are currently capable of producing it provides further pricing

discipline for proprietary data products. Each SRO, TRF, ATS, and BD is currently

permitted to produce proprietary data products, and many currently do or have announced

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[37]   See William J. Baumol and Daniel G. Swanson, "The New Economy and
         Ubiquitous Competitive Price Discrimination: Identifying Defensible Criteria of
         Market Power," Antitrust Law Journal, Vol. 70, No. 3 (2003).

plans to do so, including Nasdaq, NYSE, NYSE MKT, NYSE Arca, and the BATS exchanges.

In this case, the proposed rule change enhances competition by introducing a new product that increases transparency into options transactions and democratizes information by providing the benefits of sophisticated analytical techniques to firms without the technology, staff or wherewithal to conduct a comparable analysis on their own. If the price were to become unattractive, those firms would opt not to purchase the product. The net effect of introducing this product into the market is to make market sentiment information more widely available to a broader array of investors, and lower the cost of accessing such information, thereby increasing market efficiency. For all of these reasons, the Exchange does not believe that the proposed changes will impair competition in the financial markets.

5.   <u>Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others</u>

No written comments were either solicited or received.

6.   <u>Extension of Time Period for Commission Action</u>

The Exchange does not consent to an extension of the time period for Commission action.

7.   <u>Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2)</u>

The Exchange requests accelerated effectiveness pursuant to Section 19(b)(2) of the Act.[38] The Exchange believes that there is good cause for the Commission to accelerate effectiveness because the proposed product is designed to increase

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[38]   15 U.S.C. 78s(b)(2).

transparency and provide the benefits of sophisticated analytical techniques to firms and

individuals able to benefit from that analysis. Such broader distribution of data and

information is consistent with the protection of investors and the public interest.

Accordingly, the Exchange believes that no regulatory purpose would be served by

delaying implementation of the proposal beyond the close of the period for public

comment on the proposed rule change.

8.   Proposed Rule Change Based on Rules of Another Self-Regulatory Organization
      or of the Commission

      Not applicable.

9.   Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act

      Not applicable.

10.   Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing and
      Settlement Supervision Act

      Not applicable.

11.   Exhibits

      1.   Notice of Proposed Rule Change for publication in the Federal Register.

      5.   Text of the proposed rule change.

EXHIBIT 1

SECURITIES AND EXCHANGE COMMISSION
(Release No.   ; File No. SR-Phlx-2017-74)

September __, 2017

Self-Regulatory Organizations; NASDAQ PHLX LLC; Notice of Filing of Proposed
Rule Change to Introduce the Intellicator Analytic Tool

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 September 12, 2017, NASDAQ

PHLX LLC ("Phlx" 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 introduce the Intellicator Analytic Tool, a new market

data product designed to analyze options market transactions and synthesize that analysis

to assist investors in assessing the equities underlying those transactions.

The Exchange has designated this filing to be operative on October 23, 2017, if

approved by the Commission.

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

http://nasdaqphlx.cchwallstreet.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]   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 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 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 purpose of the proposed rule change is to introduce the Intellicator Analytic

Tool, a new, optional market data product available for a corresponding fee[3] that is

designed to analyze options market transactions and synthesize that analysis to assist

investors in assessing the equities underlying those transactions.[4]

       Options market transactions can be complex; the purpose of the Intellicator

Analytic Tool is to distill options data into a form that will help investors understand

options market movements and provide them with actionable insight in changing market

conditions. The Intellicator Analytic Tool will offer three increasingly sophisticated

levels of analysis. The first level, the Single-Factor Analytic Bundle, calculates

fundamental measures, or "factors," of options market activity—Put/Call Ratio,

Moneyness Ratio, Volume-Weighted Average Delta, and Weighted Average Strike

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[3]   A separate filing will address the pricing for the Intellicator Analytic Tool, which
       will also be implemented on October 23, 2017, if approved by the Commission.

[4]   The Exchange initially filed the proposed changes on August 2, 2017 (SR-Phlx
       2017-62). On August 11, 2017, the Exchange withdrew that filing.

Price—and applies those factors to certain segments of activity on the Exchange. The second level, the Single-Factor Intellicator, uses machine learning—an analytical technique that employs algorithms that iteratively "learn" from data to find hidden insights without explicit programming—to summarize in a single numeral the information contained within a Single-Factor Analytic Bundle. The third level, the Multi-Factor Intellicator, uses machine learning to summarize in a single numeral all of the information contained within all of the five Single-Factor Analytic Bundles offered with this product.

The Exchange will propose, in a forthcoming fee filing, separate fees for the Single-Factor Analytic Bundle, the Single-Factor Intellicator, and the Multi-Factor Intellicator, as well as special rates for the purchase of any combination of these, to allow investors to choose the tool that best fits their needs. The Single-Factor Analytic Bundles are designed to be used by sophisticated investors to supplement, test and inform their own analytic models. The Single- and Multi-Factor Intellicators are designed for the use of investors who seek to understand market sentiment without undertaking complex calculations. Although tailored for different audiences, the Analytic Bundles and Single- and Multi-Factor Intellicators are all designed to increase visibility into options transactions and democratize information to provide the benefits of sophisticated analytical techniques to firms without the technology, staff or wherewithal to conduct a comparable analysis on their own.

The Analytic Bundles and Single- and Multi-Factor Intellicators are described in further detail below.

Single-Factor Analytic Bundle

A Single-Factor Analytic Bundle is a set of calculations of "factors," or standard measures of options market activity, often used as indicia of market sentiment. The Intellicator Analytic Tool will calculate four factors—Put/Call Ratio, Moneyness Ratio, Volume-Weighted Average Delta, and Weighted Average Stock Price—defined as follows:[5]

(i)   Put/Call Ratio: The total number of put contracts traded divided by the total number of put and call contracts traded within the prior 60 seconds for each underlying symbol.

(ii)   Moneyness Ratio: The natural log of the ratio of the price of the underlying equity to the strike price of the options contract traded within the prior 60 seconds.[6]

(iii)   Volume-Weighted Average Delta: A calculation of the projected change to an option price given a $1 change in the equity price, weighted by the number of contracts traded within the prior 60 seconds.

(iv)   Weighted Average Strike Price: A calculation of the strike price of the options contracts traded within the prior 60 seconds, weighted by the number of days to expiration.[7]

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[5]   The Exchange may introduce new factors that are found to have value in assessing market sentiment, but will submit a new filing for approval if other factors are added.

[6]   The ratios for calls are multiplied by 1, while ratios for puts are multiplied by -1.

[7]   A higher weighting is given to contracts near expiration.

Each of these Single-Factor Analytic Bundles will provide separate calculations

of a specific factor for between five and fifty different segments, or subsets, of the

options market.[8] Segments may be simple or complex. A simple segment may be all

transactions with a certain range of expiration dates. Examples of complex segments

include: "Customers[9] who buy to open a new position," "Non-Customers[10] who sell to

close an existing position," or "Market Makers[11] engaging in complex orders." Segments

will be segregated using the following nine fields of information, either alone or in

combination: (i) put vs. call; (ii) expiration date; (iii) customer type; (iv) "moneyness";

(v) open vs. close; (vi) buy vs. sell; (vii) order type; (viii) add vs. remove liquidity; and

(ix) electronic vs. manual transaction. These fields are defined as follows:

> (i)   Put vs. Call: whether the instrument is a put (an option to sell assets at an
>
>   agreed upon price on or before a particular date) or a call (an option to buy
>
>   assets at an agreed-upon price on or before a particular date).
>
> (ii)   Expiration date: the number of days to contract expiration. Transactions
>
>   are assigned to one of five ranges: one week (less than or equal to 7 days

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[8]   Factor calculations for specific segments of the market will not be sold by the
        Exchange separately from the Analytic Bundles.

[9]   The term "Customer" applies to any transaction that is identified by a member or
        member organization for clearing in the Customer range at The Options Clearing
        Corporation ("OCC") which is not for the account of a broker or dealer or for the
        account of a "Professional" (as that term is defined in Rule 1000(b)(14)).

[10]   A "Non-Customer" is any market participant other than a Customer or a Market
        Maker, such as Professional Customer, Firm, Broker-Dealer, or Joint Back Office
        (see notes 11-15).

[11]   "Market Makers" includes Specialists (see Exchange Rule 1020(a)), Registered
        Option Traders (see Exchange Rule 1014(b)), Streaming Quote Traders (see
        Exchange Rule 1014(b)(ii)(A)), and Remote Streaming Quote Traders (see
        Exchange Rule in 1014(b)(ii)(B)).

prior to expiration); one month (greater than 7 days but less than or equal

to 30 days); three months (greater than 30 days but less than or equal to 90

days to expiration); six months (greater than 90 days but less than or equal

to 180 days to expiration date; and over six months (greater than 180 days

to expiration date).

(iii)   Customer type: Customer, Professional Customer,[12] Firm,[13] Broker-

Dealer,[14] Market Maker, Joint Back Office ("JBO"),[15] off-floor broker-

dealer), or Non-Customer.

(iv)   "Moneyness": In-the-money,[16] out-the-money[17] or at-the-money.[18]

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[12]   The term "Professional Customer" applies to transactions for the accounts of
Professionals, as defined in Exchange Rule 1000(b)(14).

[13]   The term "Firm" applies to any transaction that is identified by a member or
member organization for clearing in the Firm range at the OCC.

[14]   The term "Broker-Dealer" applies to any transaction which is not subject to any
of the other transaction fees applicable within a particular category.

[15]   The term "Joint Back Office" or "JBO" applies to any transaction that is
identified by a member or member organization for clearing in the Firm range at
OCC and is identified with an origin code as a JBO. A JBO participant is a
member, member organization or non-member organization that maintains a JBO
arrangement with a clearing broker-dealer ("JBO Broker") subject to the
requirements of Regulation T, Section 220.7 of the Federal Reserve System as
discussed at Exchange Rule 703.

[16]   An options contract is in-the-money when the strike price is below 2.5% of the
price of the underlying security for a call contract, or above 2.5% of the
underlying security for a put contract.

[17]   An options contract is out-the-money when the strike price is above 2.5% of the
price of the underlying security for a call contract, or below 2.5% of the
underlying security for a put contract.

[18]   An options contract is at-the-money when the strike price is within 2.5% of the
price of the underlying security, either above or below, for either a call or a put
contract.

(v)   Open vs. Close: Whether the transaction is opening a new position or

closing an existing position.

(vi)   Buy vs. Sell.

(vii)   Execution type: simple order,[19] complex order,[20] price improvement

("PIXL") Order,[21] qualified contingent cross ("QCC"),[22] Sweep,[23]

responder to an auction, or quote from a Market Maker).

(viii)   Add vs. remove liquidity: whether the transaction adds or removes

liquidity, or has no effect on liquidity.

(ix)   Electronic vs. manual: whether the transaction takes place on the floor of

the Exchange or through the electronic order system.

Seven of these nine data fields—put vs. call; expiration date; customer type;

"moneyness"; open vs. close; buy vs. sell; and order type—are currently available in real

time for purchasers of the PHLX Orders data feed, although that feed does not include

order information on Immediate or Cancel Orders ("IOCs") or orders that are fully

executable upon receipt. IOCs and orders that are fully executable upon receipt will,

however, be used to segregate data for factor calculations in Single-Factor Analytic

Bundles. The last two data fields listed above—add vs. remove liquidity and electronic

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[19]   A single-leg option order.

[20]   A multi-legged option order.

[21]   A two-sided order that is entered into a price improvement auction.

[22]   A stock-tied option order consisting of a minimum of 1,000 options contracts
         bundled together for the purpose of crossing the order.

[23]   An order type used to accumulate a position quickly by simultaneously sending
         the order to multiple exchanges.

vs. manual transactions—are not available on any of the Exchange's data feeds, but, like

data from IOCs and fully executable orders upon receipt, will be used to segregate data

into segments for Single-Factor Analytic Bundles.

A purchaser of Single-Factor Analytic Bundles may, under certain circumstances,

be able to reverse-engineer factor calculations to obtain transaction-specific information

not otherwise available on the Exchange's data feeds.[24] For example, an investor

observing a thinly-traded stock may be able to use the Single-Factor Analytic Bundle

calculations to determine the type of customer (Customer, Professional Customer, Firm,

Broker-Dealer, etc.) adding or removing liquidity—information not otherwise available

on the Exchange's data feeds, as noted above.[25] Such information may be useful in

identifying the investment strategies of particular customer categories.

While this type of reverse-engineering is not the primary purpose of the

Intellicator Analytic Tool—and of limited usefulness given that implementation would

only be practical for thinly-traded stocks—it is consistent with the purpose of the

Intellicator Analytic Tool to make data about market sentiment available to investors.

Identifying the investment strategies of particular customer categories can provide an

investor with useful insight into market activity, which this Tool may render more

broadly available to investors. Such dissemination of market information promotes

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[24]   Similar reverse-engineering would be impossible for customers who purchase
         Intellicators alone, because such segment-specific information will not be
         provided to customers who only purchase Intellicators.

[25]   There may be other examples in which Single-Feed Analytic Bundles may be
         used to adduce transaction-specific information not provided in data feeds. For
         instance, it may also be possible to determine whether a thinly-traded stock were
         traded through an electronic or manual trade.

transparency and increases market efficiency, and, as stated in the Statutory Basis

discussion below, protects protect investors and the public interest.

The data fields identified above will be used to segregate the market into

segments by calculating factors only for transactions that meet specific criteria. Each

segment will be defined by between one and five fields; data from other fields will not be

used. By way of illustration, the three complex segments set forth above—"Customers

who buy to open a new position," "Non-Customers who sell to close an existing

position," and "Market Makers engaging in complex orders"—will be constructed using

only three segments, as shown in the following chart:

	Customers who buy to open a position	Non-Customers who sell to close an existing position	Market Makers engaging in complex orders
Put vs. Call[26]	N/A	N/A	N/A
Expiration Date	N/A	N/A	N/A
Customer type	Customer	Non-Customer	Market Maker
Moneyness	N/A	N/A	N/A
Open vs. Close	Open	Close	N/A
Buy vs. Sell	Buy	Sell	N/A
Execution type	N/A	N/A	Complex order
Add vs. remove liquidity[27]	N/A	N/A	N/A
Electronic vs. manual	N/A	N/A	N/A

Purchasers of this product will be provided the results of factor calculations for

segments of the market to be identified by the Exchange as indicative of market

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26   As noted above, the first seven fields listed in this chart (from "Put vs. Call" through "Execution type") are available in real time for purchasers of the PHLX Orders data feed, but that data feed does not include data from IOCs or orders that are fully executable upon receipt.

27   As noted above, the "add vs. remove liquidity" and "electronic vs. manual" fields are not available on any of the Exchange's proprietary data feeds.

sentiment. All of the output of the Intellicator Analytic Tool consists solely of

calculations, not raw data. The Tool is intended to provide insight into market sentiment

through aggregated calculations, not to provide real-time transaction- and order-related

information similar to a data feed.

The Exchange expects that segments will change over time. The first iteration of

the Intellicator Analytic Tool will utilize a set of segments determined to be indicative of

market sentiment based on experience and economic theory, but then will use machine

learning—algorithms that test theory against market experience—to improve calculations

by identifying additional segments with a strong relationship with the underlying equity

and adding them to the Analytic Bundles to create the most robust set of calculations

possible. Identifying relevant segments is a feature of this product, and the intellectual

property of the Exchange.

Segments will be selected for their ability to provide a robust view of market

sentiment. While any single segment may be of limited usefulness on its own, making

the same calculations repeatedly for an array of different segments will provide a more

reliable and consistent indicia of market sentiment. Providing customers with

calculations of the same factor for multiple segments allows them to evaluate market

sentiment by comparing calculations across segments. For example, market sentiment

related to simple orders may be compared to that of complex orders; calculations for

options contracts with less than 7 days to expiration may be compared to those with less

than 30 days to expiration; or calculations for options contracts that are in-the-money

may be compared to those that are out-the-money or at-the-money. The goal of all of

these comparisons is to glean information from differences in market activity that may

provide useful information about market sentiment regarding the associated underlying equity.

Calculations will be based on "rolling aggregates" of trading data, updated every 60 seconds over the course of the day.

Single-Factor Intellicators

A Single-Factor Intellicator uses machine learning to summarize in a single numeral the information contained within a Single-Factor Analytic Bundle. The number will be within a set range—possibly between one and one hundred, although the precise range may change over time—and will be designed to value market sentiment: specifically, the upward or downward pressure on the price of an equity instrument as reflected in options trading activity. The numeral will be a sort of "barometer" of trading activity that, in conjunction with other market information, will help investors make informed decisions.

The Single-Factor Intellicator will serve a different purpose than the Analytic Bundles. Whereas the Analytic Bundles are designed to provide raw calculations, the Intellicators are designed to provide an analytical overlay to those calculations to help investors interpret market sentiment. As was the case with the Analytic Bundles, nothing in the Single-Factor Intellicator can be used to glean transaction-specific information.

The calculation for the Single-Factor Intellicator will change over time, as machine learning algorithms use data to learn about the relationship between options and equities, and modify the calculation accordingly. Specifically, the Exchange will use calculated values from the Analytic Bundle to improve mathematical models of the relationship between certain options trades and the equities underlying those trades. Over time, the algorithm will optimize these equations for both the types of data used to

analyze equities and the weight of such data. The result will be a better mathematical model.

Calculations for Single-Factor Intellicators, like calculations for each factor, will be updated every 60 seconds over the course of the day.

Multi-Factor Intellicator

The Multi-Factor Intellicator uses machine learning to summarize in a single numeral all of the calculations contained in all of the five Single-Factor Analytic Bundles. As was the case with Single-Factor Intellicators, the Multi-Factor Intellicator is designed to act as a "barometer" of options trading activity, which the customer will be able to incorporate into its market analysis. The Multi-Factor Intellicator will improve over time through machine learning.

The Multi-Factor Intellicator will also be updated every 60 seconds over the course of the day.

Proposed Pricing Structure

As previously noted, the fee schedule for the Intellicator Analytic Tool will be included in a future filing. Because the Single-Factor Analytic Bundles, Single-Factor Intellicators, and Multi-Factor Intellicators may prove useful for different audiences, these components of the Intellicator Analytic Tool will be priced separately.

2.   Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[28] in general, and furthers the objectives of Section 6(b)(5)[29] of the Act in particular.

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[28]   15 U.S.C. 78f(b).

[29]   15 U.S.C. 78f(b)(5).

The proposal 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 by prompting

transparency and increasing visibility into options transactions and democratizing

information to provide the benefits of sophisticated analytical techniques to firms without

the technology, staff or wherewithal to conduct a comparable analysis on their own.

Specifically, the Single- and Multi-Factor Intellicators will provide all investors with

insight into market sentiment otherwise available only to those investors with the

technology, staff and wherewithal to conduct such an analysis. To the extent that the

Intellicator Analytic Tool uses information not otherwise available on the Exchange's

market data feeds, the effect of using such information as an input for the Tool is to make

information more widely available to investors. To the degree that investors use Single-

Factor Analytic Bundles to reverse-engineer certain factor calculations to obtain

transaction-specific information not otherwise provided on the Exchange's data feeds, the

availability of such information promotes transparency and increases market efficiency,

thereby protecting investors and the public interest. The net effect is to make information

on market sentiment more readily available to more investors, thereby removing

impediments to a free and open market and promoting just and equitable principles of

trade.

In adopting Regulation NMS,[30] the Commission granted SROs and broker-dealers

increased authority and flexibility to offer new and unique market data to the public. It

was believed that this authority would expand the amount of data available to consumers,

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[30]   See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496
          (June 29, 2005) ("Regulation NMS Adopting Release").

and also spur innovation and competition for the provision of market data. The

Intellicator Analytic Tool—a new market data product designed to analyze options

market transactions and synthesize that analysis to help investors assess the equities

underlying those transactions—is the type of market data product that the Commission

envisioned when it adopted regulation NMS. The Commission concluded that

Regulation NMS—deregulating the market in proprietary data—would further the Act's

goals of facilitating efficiency and competition:

> [E]fficiency is promoted when broker-dealers who do not need the data
> beyond the prices, sizes, market center identifications of the NBBO and
> consolidated last sale information are not required to receive (and pay for)
> such data. The Commission also believes that efficiency is promoted when
> broker-dealers may choose to receive (and pay for) additional market data
> based on their own internal analysis of the need for such data.[31]

By removing unnecessary regulatory restrictions on the ability of exchanges to

sell their own data, Regulation NMS advanced the goals of the Act and the principles

reflected in its legislative history.

In NetCoalition v. Securities and Exchange Commission[32] ("NetCoalition") the

D.C. Circuit upheld the Commission's use of a market-based approach in evaluating the

fairness of market data fees against a challenge claiming that Congress mandated a cost-

based approach.[33] As the court emphasized, the Commission "intended in Regulation

NMS that 'market forces, rather than regulatory requirements' play a role in determining

the market data . . . to be made available to investors and at what cost."[34] "No one

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[31]   Id.

[32]   See NetCoalition v. SEC, 615 F.3d 525 (D.C. Cir. 2010).

[33]   Id. at 534 - 535.

[34]   Id. at 537.

disputes that competition for order flow is 'fierce.' … As the SEC explained, '[i]n the

U.S. national market system, buyers and sellers of securities, and the broker-dealers that

act as their order-routing agents, have a wide range of choices of where to route orders

for execution'; [and] 'no exchange can afford to take its market share percentages for

granted' because 'no exchange possesses a monopoly, regulatory or otherwise, in the

execution of order flow from broker dealers'…."[35]

Data products such as the Intellicator Analytic Tool are a means by which

exchanges compete to attract order flow. To the extent that exchanges are successful in

such competition, they earn trading revenues and also enhance the value of their data

products by increasing the amount of data they provide. The need to compete for order

flow places substantial pressure upon exchanges to keep their fees for both executions

and data reasonable.[36]

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

The Exchange does not believe that the proposed rule change will impose any

burden on competition not necessary or appropriate in furtherance of the purposes of the

Act. Indeed, the Exchange believes that the Intellicator Analytic Tool enhances

competition by increasing transparency into options transactions and democratizing

information to provide the benefits of sophisticated analytical techniques to firms without

the technology, staff or wherewithal to conduct a comparable analysis on their own.

Many firms produce internal analytic models to assess market sentiment similar to the

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35   Id. at 539 (quoting Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770, 74782-83 (December 9, 2008) (SR-NYSEArca-2006-21)).

36   See Sec. Indus. Fin. Mkts. Ass'n (SIFMA), Initial Decision Release No. 1015, 2016 SEC LEXIS 2278 (ALJ June 1, 2016) (finding the existence of vigorous competition with respect to non-core market data).

Intellicator Analytic Tool; the introduction of this Tool will increase competition by making such models available to more investors.

The market for data products is extremely competitive and firms may freely choose alternative venues and data vendors based on the aggregate fees assessed, the data offered, and the value provided. Numerous exchanges compete with each other for listings, trades, and market data itself, providing virtually limitless opportunities for entrepreneurs who wish to produce and distribute their own market data. Transaction execution and proprietary data products are complementary in that market data is both an input and a byproduct of the execution service. In fact, market data and trade execution are a paradigmatic example of joint products with joint costs. The decision whether and on which platform to post an order will depend on the attributes of the platform where the order can be posted, including the execution fees, data quality and price. Without trade executions, exchange data products cannot exist. Moreover, data products, including the Intellicator Analytic Tool, are valuable to many end users only insofar as they provide information that end users expect will assist them or their customers in making trading decisions.

The costs of producing market data include not only the costs of the data distribution infrastructure, but also the costs of designing, maintaining, and operating the exchange's transaction execution platform and the cost of regulating the exchange to ensure its fair operation and maintain investor confidence. The total return that a trading platform earns reflects the revenues it receives from both products and the joint costs it incurs. Moreover, the operation of the exchange is characterized by high fixed costs and low marginal costs. This cost structure is common in content distribution industries such

as software, where developing new software typically requires a large initial investment

(and continuing large investments to upgrade the software), but once the software is

developed, the incremental cost of providing that software to an additional user is

typically small, or even zero (*e.g.,* if the software can be downloaded over the internet

after being purchased).[37] It is costly to build and maintain a trading platform, but the

incremental cost of trading each additional share on an existing platform, or of

distributing an additional instance of data, is very low. Market information and

executions are each produced jointly (in the sense that the activities of trading and

placing orders are the source of the information that is distributed) and are each subject to

significant scale economies.

Competition among trading platforms can be expected to constrain the aggregate

return each platform earns from the sale of its joint products. The level of competition

and contestability in the market is evident in the numerous alternative venues that

compete for order flow, including SRO markets, as well as internalizing BDs and various

forms of alternative trading systems ("ATSs"), including dark pools and electronic

communication networks ("ECNs"). Each SRO market competes to produce transaction

reports via trade executions, and two FINRA-regulated TRFs compete to attract

internalized transaction reports. It is common for BDs to further and exploit this

competition by sending their order flow and transaction reports to multiple markets,

rather than providing them all to a single market. Competitive markets for order flow,

executions, and transaction reports provide pricing discipline for the inputs of proprietary

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[37]   See William J. Baumol and Daniel G. Swanson, "The New Economy and
         Ubiquitous Competitive Price Discrimination: Identifying Defensible Criteria of
         Market Power," Antitrust Law Journal, Vol. 70, No. 3 (2003).

data products. The large number of SROs, TRFs, BDs, and ATSs that currently produce

proprietary data or are currently capable of producing it provides further pricing

discipline for proprietary data products. Each SRO, TRF, ATS, and BD is currently

permitted to produce proprietary data products, and many currently do or have announced

plans to do so, including Nasdaq, NYSE, NYSE MKT, NYSE Arca, and the BATS

exchanges.

       In this case, the proposed rule change enhances competition by introducing a new

product that increases transparency into options transactions and democratizes

information by providing the benefits of sophisticated analytical techniques to firms

without the technology, staff or wherewithal to conduct a comparable analysis on their

own. If the price were to become unattractive, those firms would opt not to purchase the

product. The net effect of introducing this product into the market is to make market

sentiment information more widely available to a broader array of investors, and lower

the cost of accessing such information, thereby increasing market efficiency. For all of

these reasons, the Exchange does not believe that the proposed changes will impair

competition in the financial markets.

       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-

    Phlx-2017-74 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-Phlx-2017-74. 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 Web site

(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 office of the Exchange.

All comments received will be posted without change; the Commission does not edit

personal identifying information from submissions. You should submit only information

that you wish to make available publicly.

All submissions should refer to File Number SR-Phlx-2017-74 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.[38]

> Eduardo A. Aleman
> Assistant Secretary

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[38]   17 CFR 200.30-3(a)(12).

EXHIBIT 5

New text is <u>underlined</u>.

NASDAQ PHLX Rules

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NASDAQ PHLX LLC Pricing Schedule

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IX. Proprietary Data Feed Fees

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<u>**Intellicator Analytic Tool**</u>

<u>(a) The Intellicator Analytic Tool shall consist of the following components:</u>

<u>(1) "Single-Factor Analytic Bundles," which shall mean baskets of calculations of fundamental measures, or "factors," of options market activity; each Single-Factor Analytic Bundle will contain calculations for one of the following five factors:</u>

<u>(A) "Put/Call Ratio," a ratio between put and call options contracts traded within a specific time interval;</u>

<u>(B) "Moneyness Ratio," a ratio of the price of the underlying equity to the strike price of the options contract within a specific time interval;</u>

<u>(C) "Volume-Weighted Implied Volatility," a calculation of the implied volatility of the options contracts traded within a specific time interval, weighted by the number of contracts traded;</u>

<u>(D) "Volume-Weighted Average Delta," a calculation of the projected change to an option price given a $1 change in the equity price, weighted by the number of contracts traded within a specific time interval; and</u>

<u>(E) "Weighted Average Strike Price," a calculation of the strike price of options contracts traded within a given time interval, weighted by the number of days to expiration.</u>

<u>(2) An "Intellicator," which shall mean a numeral that synthesizes calculations from an Analytic Bundle in a manner designed to capture various aspects of the relationship between trading in options and the value of underlying equity instruments. An Intellicator uses machine learning algorithms to adjust the calculation based on new data or improved analytical techniques. Each Single-Factor Analytic Bundle will have a Single-Factor Intellicator associated with it to summarize the data contained within that Bundle. All Single-Factor Analytic Bundles together will have a Multi-Factor Intellicator that will summarize the data contained within all of the Single-Factor Analytic Bundles combined.</u>

(b) Calculations for the Intellicator Analytic Tool shall be updated at 60 second intervals over the course of a trading day.

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