

SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-89725; File No. SR-Phlx-2020-41)

September 1, 2020

Self-Regulatory Organizations; Nasdaq PHLX LLC; Notice of Filing of Proposed Rule Change to List and Trade Options on a Nasdaq-100[®] Volatility Index

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 August 24, 2020, 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 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

The Exchange proposes to list and trade options on a Nasdaq-100[®] Volatility Index (Ticker Symbol: VOLQ), a new index that measures changes in 30-day implied volatility of the Nasdaq-100 Index. Options on the new index, also ticker symbol VOLQ, will be cash-settled and will have European-style exercise provisions.

The text of the proposed rule change is available on the Exchange’s Website at <https://listingcenter.nasdaq.com/rulebook/phlx/rules>, at the principal office of the Exchange, and at the Commission’s Public Reference Room.

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 Exchange proposes to introduce a new options index product, the Nasdaq-100 Volatility Index (the “Volatility Index”). This product would enable retail and institutional investors to manage volatility versus price risk. This index will measure “at-the-money” volatility, a precise measure of volatility used by investors. Unlike other indexes, this proposed novel product isolates at-the-money volatility for precise trading and hedging strategies. This product will provide investors information on volatility index returns by allowing them to observe increases and decreases of the Volatility Index.

Specifically, the Exchange proposes to provide for the listing and trading on the Exchange of options on a new index that measures changes in 30-day implied volatility of the Nasdaq-100 Index (commonly known as and referred to by its ticker symbol, NDX). Options on the Volatility Index will be cash-settled and will have European-style exercise provisions. The Volatility Index, calculated using published real-time bid/ask quotes of NDX options, represents 30-day implied volatility and will be disseminated in annualized percentage points. The Exchange proposes to amend Options 4A, Section 12, “Terms of Option Contracts,” at subparagraphs (b)(2), (b)(6) and (e) as well as Supplementary Material .01 to Options 4A,

Section 12. The Exchange also proposes to amend Options 3. Section 3, “Minimum Increments” and Options 4A, Section 6, “Position Limits.”

The Exchange proposes to list up to six weekly expirations and up to 12 standard (monthly) expirations in Volatility Index options. The six weekly expirations would be for the nearest weekly expirations from the actual listing date, and the weekly expirations would not expire in the same week in which standard (monthly) Volatility Index options expire. Standard (monthly) expirations in the Volatility Index options would not be counted as part of the maximum six weekly expirations permitted for Volatility Index options.³

Volatility Index Design and Composition

The calculation of the Volatility Index is based on the methodology developed by NShares LLC, a firm that develops proprietary derivatives-based indexes and options enhanced indexes. The Volatility Index reflects changes in 30-day implied volatility, which measures magnitude of changes of the underlying broad-based securities index, NDX, calculated and maintained by Nasdaq, Inc., which is an affiliate of the Exchange. The Nasdaq-100 Index includes 100 of the largest⁴ domestic and international non-financial companies listed on The Nasdaq Stock Market LLC based on market capitalization. The Index reflects companies across major industry groups including computer hardware and software, telecommunications, retail/wholesale trade and biotechnology. It does not contain securities of financial companies

³ See Options 4A, Section 12, Terms of Option Contracts, proposed new section (b)(viii)(A), which is based upon Cboe Exchange, Inc. (“Cboe”) Rule 4.13(a)(2) as applicable to Volatility Index (“VIX”) options.

⁴ As of June 30, 2020, there were 78 components in the bottom 25% of Nasdaq-100 Index weight. From January 1 through June 30, 2020, these components had an Average Daily Dollar Trading Volume of \$29.7 billion. The Average Daily Dollar Trading Volume of the least active component was \$41.1 million. The aggregate market capitalization of the 78 components was \$2.60 trillion.

including investment companies.

The Volatility Index, which is a broad-based securities index pursuant to Phlx Options 4A, Section 2(a)(13)⁵, measures the expectation for market volatility over the next 30 calendar days as expressed by options on NDX. The Volatility Index uses the prices of certain listed options on NDX to obtain the prices of synthetic precisely at-the-money (“ATM”) options. The ultimate Volatility Index component options used directly in the computation include a total of eight NDX options from each of four expirations for a total of thirty-two component options derived from observation of thirty-two NDX option bids and thirty-two NDX options offers (a total of sixty-four input observations). The synthetic ATM option prices are then used to calculate 30-day closed-form implied volatility. The result is a closed-form measure of implied volatility for the Nasdaq-100 Index that focuses on the options practitioners, hedgers, and traders use most, at-the-money options.

The generalized formula for Closed-Form Implied Volatility (CFIV) is:

$$\text{Closed Form Implied Volatility} = \frac{\sqrt{2\pi}}{\left(\frac{F}{e^{R*T}} * \sqrt{T}\right)} * \text{Precisely ATM Option Price}$$

Where:

F is the forward price for the underlying asset calculated using put/call parity;

R is the annualized risk free rate;

T is time to expiration expressed as a fraction of a year;

Precisely ATM Option Price is the calculated price for an option with a strike price exactly equal to the forward price.

⁵ Options 4A, Section 2(a)(13) define a “market index” and “broad-based index” to mean an index designed to be representative of a stock market as a whole or of a range of companies in unrelated industries. Like the Cboe Volatility Index (“VIX”), the Nasdaq-100 Volatility Index is an implied volatility index and not a realized volatility index.

The formula for the Volatility Index is:

$$VOLQ = 100 * CFIV_{30-Day}$$

Where:

$CFIV_{30-Day}$ is calculated using the Closed Form Implied Volatility for four weekly expirations as described in the methodology document attached [sic] as Exhibit 3-1.

The underlying asset for the Volatility Index is NDX. The thirty-two NDX component options used directly in the index calculation consist of the first and second in-the-money and the first and second out-of-the-money call and put options in the first-term, second-term, third-term, and fourth-term expirations (as described below). The price of any option is computed as the simple average of the best bid and ask prices (accordingly, thirty-two bids and thirty-two asks are observed for a total of sixty-four initial input observations to arrive at thirty-two Volatility Index components). The relevant NDX option prices used in the Volatility Index construction are the NBBO (National Best Bid and Offer).

This proposed broad-based product does not have single or aggregated component concentration risk. The methodology caps each single component as well as the top five weighted components. Specifically, no component security of the Volatility Index comprises more than 12.50% of the index's weighting. Further, the five highest weighted component securities of the Volatility Index in the aggregate do not comprise more than 43.75% of the index's weighting.

The options on NDX used in the Volatility Index calculation are the A.M.- and P.M.-settled options expiring on Friday, unless Friday is an exchange holiday. The A.M.-settled options are those which expire on the third Friday of the month. The P.M.-settled options are

those which expire on other Fridays during the month. At the beginning of regular trading hours (9:30 A.M. ET) each Thursday (or the commencement of trading on the next trading day if Thursday is an exchange holiday), the constituent options “roll” to new contract maturities. The new first-term options are those expiring on the Friday (or the expiration immediately prior to that Friday, if an exchange holiday), which is 22 days after the nominal Thursday roll date. The new second-term options are those expiring on the Friday (or the expiration immediately prior to that Friday, if an exchange holiday), which is 29 days after the nominal Thursday roll date. The new third-term options are those expiring on the Friday (or the expiration immediately subsequent to the Friday, if an exchange holiday), which is 36 days after the nominal Thursday roll date. The new fourth-term options are those expiring on the Friday (or the expiration immediately subsequent to the Friday, if an exchange holiday), which is 43 days after the nominal Thursday roll date.

The Volatility Index is quoted in annualized percentage points. For example, an Index level of 17.90 represents an annualized implied volatility of 17.90%.

Index Calculation and Maintenance

The level of the Volatility Index will reflect the current 30-day implied volatility of NDX. The Volatility Index will be updated on a real-time basis on each trading day beginning at 9:30 A.M. and ending at 4:15 P.M. (New York time). If the current published value of a component is not available, the last published value will be used in the calculation.

Values of the Volatility Index will be disseminated via the Nasdaq GIDS market data system every 15 seconds during the Exchange’s regular trading hours to market information vendors such as Bloomberg and Thomson Reuters. In the event the Volatility Index ceases to be maintained or calculated the Exchange will not list any additional series for trading and will limit

all transactions in such options to closing transactions only for the purpose of maintaining a fair and orderly market and protecting investors.

Exercise and Settlement Value

The exercise settlement value calculation used for Volatility Index option settlement would be calculated on the same day as the Volatility Index Options expiration date. The exercise settlement value of a Volatility Index option would be calculated on the specific date (usually a Wednesday) identified in the option symbol for the series. If that Wednesday or the Friday that is 30 days following that Wednesday is an Exchange holiday, the exercise settlement value would be calculated on the business day immediately preceding that Wednesday. The last trading day for a Volatility Index option would be the business day immediately preceding the expiration date of the Volatility Index option. When the last trading day is moved because of an Exchange holiday, the last trading day for an expiring Volatility Index option contract would be the day immediately preceding the last regularly scheduled business day.⁶

Monthly options on the Volatility Index would expire on the Wednesday that is thirty days prior to the third Friday of the calendar month immediately following the expiring month. Trading in expiring options on the Volatility Index would normally cease at 4:15 P.M. (New York time) on the Tuesday preceding an expiration Wednesday.

Final Settlement

The final settlement price (Ticker Symbol: VOLS) would be calculated as described below on Wednesday commencing at 9:32:000 A.M. on the expiration day, and continuing each second for the next 300 seconds (New York time). The exercise settlement amount would be

⁶ See Options 4A, Section 12, "Terms of Option Contracts," proposed new section (b)(6)(B) and (C), which is based upon Cboe Rule 4.13(a)(5)(A)(2) and (C) as applicable to VIX options.

equal to the difference between the final settlement price and the exercise price of the option, multiplied by \$100. Exercise would result in the delivery of cash on the business day following expiration.

The Volatility Index's component NDX options are listed on Phlx as well as on the Exchange's affiliates, Nasdaq ISE, LLC ("ISE") and Nasdaq GEMX, LLC ("GEMX"). The settlement value for the Volatility Index options (ticker symbol "VOLS") will be the Closing Volume Weighted Average Price ("Closing VWAP"), to be determined by reference to the prices and sizes of executed transactions or quotes in the thirty-two underlying NDX component options⁷ on the Exchange calculated at the opening of trading on the expiration date (usually a Wednesday).

The following process is used to calculate the Closing VWAP of the Volatility Index options.⁸ At the end of individual one-second time observations during a 300 second period of time (the "Closing Settlement Period")⁹ commencing at 9:32:00 on the expiration day (or

⁷ Dependent upon movement in the Nasdaq-100 Index, all of the Closing Settlement Period index (VOLS) thirty-two underlying NDX component options can change every second making live market final settlement replication unfeasible over 300 seconds. The Exchange notes the Commission approved CBOE's change to the VIX settlement methodology to provide additional protection against manipulation by exact replication whereby CBOE will be solely responsible for determining the strike range of the settlement strip, making it impossible for anyone to attempt to manipulate the VIX settlement process by attempting to artificially affect which SPX series will have zero bids at the opening and thus potentially be included in the settlement strip. See Securities Exchange Act Release No. 86879 (September 5, 2019), 84 FR 47984 (September 11, 2019) (SR-CBOE-2019-034).

⁸ The Exchange shall be the reporting authority for VOLQ Index. The term "reporting authority" in respect of a particular index means the institutions or reporting service designated by the Exchange as the official source for calculating and determining the current value or the closing index value of the index. See Phlx Options 4A, Section 2(a)(16).

⁹ The Exchange notes the extensive five-minute length of the VOLS Closing Settlement Period is similar to final settlement construction of the EURO STOXX 50 VOLATILITY index (VSTOXX) (average of all valid ticks that index produced during an expanding

2.00.001 minutes after the open of trading in the event trading does not commence at 9:30:00 a.m. ET),¹⁰ and continuing each second for the next 300 seconds, the number of contracts traded on Phlx at each price during the observation period is multiplied by that price to yield a Reference Number.¹¹ All Reference Numbers are then summed, and that sum is then divided by the total number of contracts traded during the observation period [Sum of (contracts traded at a price x price) ÷ total contracts traded] to calculate a Volume Weighted Average Price for that observation period (a “One Second VWAP”) for that component option. If no transactions occur on Phlx during any one-second observation period, the NBBO midpoint¹² at the end of the one second observation period will be considered the One Second VWAP for that observation period for purposes of this settlement methodology. Specifically, VOLS would seek the best bid and best offer (which may consist of a quote or an order) from among the listing markets, Phlx, ISE

time window starting at 11:30:00 CET up to the current calculation time and not later than 12:00:00 CET). Both VSTOXX and VOLS inject substantive randomization for which components may change and market participants cannot know index components on a forward-looking basis.

¹⁰ If the Exchange is unable to publish a settlement value by 12:00 p.m. (New York Time) due to a trading halt, the Exchange will determine and publish a value on its website. In the event of a trading halt, the Exchange will commence the calculation of the settlement window beginning 2.00.001 minutes after the re-opening of trading.

¹¹ The Volatility Index final settlement treats options inclusion prices largely similar to the EURO STOXX 50 VOLATILITY (VSTOXX) index whereby the options inclusion price is defined as first priority, the most recent trade price and then second, the midpoint bid/ask price.

¹² The Volatility Index’s component NDX options are listed on Phlx as well as on the Exchange’s affiliates, ISE, GEMX. NDX average bid/ask spreads for all component options at each second for each of four expiration dates (11/21/2018, 12/19/2018, 1/16/2019, and 2/13/2019) commencing at 9:30:15 A.M. is 5.52%. Commencing at 9:32.010 A.M. the NDX average bid/ask spreads for all component options at each second for each of four expiration dates is 3.72%, demonstrating quote stability at 2 minutes after the opening.

and GEMX markets.¹³ Each One Second VWAP for each component option is then used to calculate the Volatility Index, resulting in the calculation of 300 sequential Volatility Index values. Finally, all 300 Volatility Index values will be arithmetically averaged (i.e., the sum of 300 Volatility Index calculations is divided by 300) and the resulting figure is rounded to the nearest .01 to arrive at the settlement value disseminated under the ticker symbol VOLS.¹⁴

The Exchange notes the Volatility Index final settlement has exceedingly high hurdles for potential manipulation. First, the Volatility Index assesses each second of the entire field of NDX options prices to select certain listed options to obtain the prices of synthetic precisely at-the-money options. Accordingly, since the market is subject to constant change during three hundred individual one-second time periods for which listed options will be included in final settlement, market participants cannot predict which components will be included, which would entail predicting where the Nasdaq-100 Index price level (a function of predicting the price of all one-hundred component stocks) will be at the end of each of the three hundred individual one-second time periods.

Second, in the event the number of contracts traded at each price during the observation period is limited or zero, traders are subject to highly competitive market forces of deep and established market liquidity. Streaming bid/ask quotes on notional total contract value [Number of Contracts on Bid (Offer) times \$100 multiplier times the Nasdaq-100 Index price level] during the final settlement observation often exceed one billion dollars, a figure which would require substantive capital to influence quotes. Taken together, during each second of the final

¹³ By considering the NBBO of all three markets, the Exchange believes the risk of manipulation is tempered by the consideration of a larger number of quotes from multiple Market Makers.

¹⁴ See Options 4A, Section 12, "Terms of Option Contracts," proposed new section (b)(6)(D)(II).

settlement observation period on January 16, 2019 and February 13, 2019, the average notional value of each bid of the thirty-two components was \$21.1 million; the average notional value of each offer was \$13.5 million. The sum of all thirty-two component notional value bid quotes was \$675.9 million; the sum of all thirty-two component notional value ask quotes was \$432.89 million (a bid/ask notional value of \$1.1 billion).

Third, since the Volatility Index assesses each second of all listed NDX options, this is a continuous assessment of competitive price action and voluminous trading activity for all Nasdaq-100 Index stock components. During the final settlement observation period (five-minute period) on January 16, 2019 and February 13, 2019, the average summation of traded volume for all Nasdaq-100 Index component shares was 18.8 million shares. The average total value of all Nasdaq-100 Index shares traded during the final settlement observation period was \$1.93 billion. The corresponding market capitalization for all Nasdaq-100 Index components during the final settlement period was \$7.8 trillion.

Contract Specifications

The contract specifications for options on the Volatility Index are set forth in Exhibit 3-2. As noted above, the Volatility Index is a market index or a broad-based index, as defined in Phlx Options 4A, Section 2(a)(13). Options on the Volatility Index are European-style and cash-settled. The Exchange's standard trading hours for broad-based index options (9:30 A.M. to 4:15 P.M., New York time) will apply to the Volatility Index options under Phlx Options 4A, Section 12 at Supplementary Material .01, as proposed to be amended. The Exchange proposes to apply margin requirements for the purchase and sale of options on the Volatility Index that are identical to those applied for its other broad-based index options.

The trading of options on the Volatility Index will be subject to the trading halt procedures applicable to other index options traded on the Exchange.¹⁵ Options on the Index will be quoted and traded in U.S. dollars.¹⁶ Accordingly, all Exchange and The Options Clearing Corporation members will be able to accommodate trading, clearance and settlement of the Volatility Index without alteration. All options on the index would have a minimum increment for options trading below 3.00 of 0.05 (\$5.00) and for all other series, 0.10 (\$10.00).

The Exchange proposes to set the minimum strike price interval for options on the Volatility Index at \$0.50 or greater where the strike price is less than \$75, \$1 or greater where the strike price is \$200 or less and \$5 or greater where the strike price is more than \$200.¹⁷ The Exchange believes that these strike price intervals will provide investors with greater flexibility by allowing them to establish positions that are better tailored to meet their investment objectives.

The Exchange proposes that there shall be no position or exercise limits for options on the Volatility Index. As noted above, the Volatility Index will settle using published volume and / or quotes from NDX options. Given that there are currently no position limits for NDX options,¹⁸ the Exchange believes it is appropriate for there to be no position or exercise limits¹⁹

¹⁵ Phlx Options 4A, Section 18(c), “Trading Rotations, Halts or Reopenings.”

¹⁶ Phlx Options 4A, Section 12(a)(1) titled “Meaning of Premium Bids and Offers,” provides that bids and offers shall be expressed in terms of dollars and decimal equivalents of dollars per unit of the index (e.g., a bid of 85.50 would represent a bid of \$85.50 per unit).

¹⁷ Phlx Options 4A, Section 12 “Terms of Option Contracts,” proposed new section (b)(6)(E).

¹⁸ See Phlx Options 4A, Section 6, “Position Limits,” section (a)(ii).

¹⁹ Phlx Options 4A, Section 10, “Exercise Limits,” provides “In determining compliance with Options 9, Section 15, exercise limits for index option contracts shall be equivalent to the position limits described in Options 4A, Section 6.”

for options on the Volatility Index. The underlying Nasdaq-100 Index includes 100 of the largest domestic and international non-financial securities listed on The Nasdaq Stock Market LLC based on market capitalization. The Index reflects companies across major industry groups including computer hardware and software, telecommunications, retail/wholesale trade and biotechnology. It does not contain securities of financial companies including investment companies. As of June 30, 2020, the Nasdaq-100 Index contained 74.7 billion component shares representing \$11.42 trillion market value. By extension, the Exchange believes that the same reasoning applies to options on the Volatility Index since the value of options on the Volatility Index is derived from the volatility of NDX as implied by its options. The Exchange notes that options on the Miami International Securities Exchange LLC (“MIAX”) SPIKES Index, and options on the Cboe Volatility (“VIX”) Index are also not subject to any position or exercise limits.²⁰ SPX, which underlies the Cboe Volatility Index, is one of the most actively trading index option and is, therefore, subject to no position limits. Accordingly, NDX, which underlies the VOLQ Index, is also one of the most actively trading index option and is, therefore, subject to no position limits.

The trading of options on the Volatility Index would be subject to the same rules that presently govern the trading of Exchange index options, including sales practice rules, margin requirements, and trading rules. In addition, long term option series having up to sixty months to expiration could be traded.²¹ The trading of long term options on the Volatility Index would also

²⁰ See ISE Options 4A, Section 12, Cboe Rule 4.13 and MIAX Rule 1804. Additionally, the Exchange notes there are currently a number of other actively-traded broad-based index options, i.e., DJX and SPX, that are not subject to any position or exercise limits.

²¹ Phlx Options 4A, Section 12(b)(2), as proposed to be amended. Phlx Rule Options 4A, Section 12(b)(2) currently applies only to stock index options and would be amended to permit listing of long term Volatility Index options. The Commission has previously

be subject to the same rules that govern the trading of all the Exchange's index options, including sales practice rules, margin requirements, and trading rules.

Options 10, Section 6, "Opening of Accounts," is designed to protect public customer trading and shall apply to trading in options on the Volatility Index. Specifically, Options 10, Section 6(a) prohibits members and member organizations from accepting a customer order to purchase or write an option, including options on the Volatility Index, unless such customer's account has been approved in writing by an Options Principal. Additionally, Phlx Options 10, Section 8, "Suitability," is designed to ensure that options, including options on the Volatility Index, are only sold to customers capable of evaluating and bearing the risks associated with trading in this instrument. Further, Phlx Options 10, Section 9, "Discretionary Accounts," permits members and member organizations to exercise discretionary power with respect to trading options, including options on the Volatility Index, in a customer's account only if the customer has given prior written authorization and the account has been accepted in writing by a Registered Options Principal. Phlx Options 10, Section 9 also requires a record to be made of every option transaction for an account in respect to which a member or member organization or a partner, officer or employee of a member organization is vested with any discretionary authority, such record to include the name of the customer, the designation, number of contracts and premium of the option contracts, the date and time when such transaction took place and clearly reflecting the fact that discretionary authority was exercised. Finally, Phlx Options 10, Section 7, "Supervision of Accounts," Phlx Options 10, Section 10, "Confirmations to

approved long term options on the Nations VolDex Index. See Securities Exchange Act Release No. 71365, 79 FR 4512 (January 28, 2014) (approving SR-ISE- 2013-42).

Customers,” and Phlx Options 10, Section 13, “Delivery of Options Disclosure Documents,” will also apply to trading in options on the Volatility Index.

Surveillance and Capacity

The Exchange has an adequate surveillance program in place for options traded on the Volatility Index and intends to apply those same program procedures that it applies to the Exchange’s other options products. Further, the Phlx Market Surveillance Department conducts routine surveillance in approximately 30 discrete areas. Index products and their respective symbols are integrated into the Exchange’s existing surveillance system architecture and are thus subject to the relevant surveillance processes. This is true for both surveillance system processing and manual processes that support the Phlx’s surveillance program. Additionally, the Exchange is also a member of the Intermarket Surveillance Group (“ISG”) under the Intermarket Surveillance Group Agreement, dated June 20, 1994. ISG members work together to coordinate surveillance and investigative information sharing in the stock and options markets.

The consistent liquidity of NDX options as well as the underlying NDX component securities ensures a multitude of market participants at any given time.²² Indeed, at least twelve Market Makers actively traded NDX options on Phlx during December 2018 on any given day, and there are now three options exchanges that list NDX options. The Exchange reiterates that it is unlikely that the Volatility Index settlement value could be manipulated. In particular, because

²² NDX options one year (July 2019 – June 2020) average daily volume was 11,678 contracts per day. For a comparative measure of liquidity, the Russell 2000 (RUT) index options one year (July 2019 – June 2020) average daily volume surpassed NDX (36,998 contracts versus 11,678 contracts). However, NDX options average daily portfolio notional value is greater than Russell 2000 (RUT) options average daily portfolio notional value (\$10.09 billion versus \$4.94 billion). The NDX options average daily portfolio notional value is the product of the average daily volume times the one year (July 2019 – June 2020) median index price times the one-hundred dollar options index multiplier divided by 253 trading days.

the 32 component Volatility Index option inputs²³ are reviewed each second as the market changes to determine the ATM strikes (meaning that Volatility Index components could change 300 times during the settlement period), market participants could manipulate the settlement value only if they could replicate such value by guessing exact market moves over an extended period of 300 million microseconds. Because the likelihood of replication is extremely low, the Exchange believes that it is unlikely the settlement value could be manipulated.

Nonetheless, the Exchange, in its normal course of surveillance, will monitor for any potential manipulation of the Volatility Index settlement value according to the Exchange's current procedures. Additionally, the Exchange would monitor the integrity of the Volatility Index by analyzing trades, quotations, and orders that affect any of the 300 calculated reference prices for any of the 32 NDX option series used for the final settlement calculation for potential manipulation on the Exchange.

In the context of surveillance, the Exchange will monitor all NDX NBBO quotes and trades (including but not limited to NDX quotes and trades on the Exchange) during the opening (from 09:32:01 A.M. to 09:37:00 A.M.) for each of the 32 at-the-money series utilized in the final settlement calculation for possible manipulation. It would also surveil for open interest manipulation by monitoring NDX positions prior to settlement to identify the economic interest (long and short), account type (customer, firm or market maker) and clearing members to evaluate customer, and firm interest in the Volatility Index options. Additionally, the Exchange will evaluate all trades in the NDX option series on the Phlx, ISE and GEMX options exchanges from one second after the Closing Settlement Period through end of the trading day for possible

²³ The Exchange notes that due to the number of proposed components, the mathematical formula would prevent the Volatility Index from exceeding 12.5% in any single component and 43.5% for the top 5 components.

wash trading or related artificial activity. Finally, the Exchange will monitor for manipulation by comparing quotes for settlement against quotes for non-settlement in the 32 NDX option series used for settlement between the opening, and a period of time thereafter, with a focus on identifying deviations of the midpoint, the bid-ask spread and other market elements compared to the Nasdaq-100 Index value.

The Exchange believes that its surveillance procedures currently in place, coupled with the additional measures proposed above, will allow it to adequately surveil for any potential manipulation in the trading of Volatility Index options.

The Exchange represents that it has the necessary system capacity to support additional quotations and messages that will result from the listing and trading of options on the Volatility Index.

Implementation

The Exchange proposes to issue an Options Trader Alert announcing the day it will launch options on Nasdaq-100 Volatility Index. The Exchange will launch these options by Q3 2021. The Exchange will issue an Options Trader Alert to announce the launch date.

The Exchange also proposes minor technical amendments within Options 4A, Sections 6 and 12 to update the name of the Nasdaq-100 Index.

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,²⁴ in general, and furthers the objectives of Section 6(b)(5) of the Act,²⁵ in particular, in that it will permit options trading in the Volatility Index pursuant to rules designed to prevent fraudulent

²⁴ 15 U.S.C. 78f(b).

²⁵ 15 U.S.C. 78f(b)(5).

and manipulative acts and practices and promote just and equitable principles of trade. In particular, the Exchange believes the proposed rule change will further the Exchange's goal of introducing new and innovative products to the marketplace. The Exchange believes that listing options on the Volatility Index will provide an opportunity for investors to hedge, or speculate on, the market risk associated with changes in 30-day implied volatility.

Volatility-focused products have become more prominent over the past few years, and in a number of different formats and types, including ETFs, exchange-traded notes, exchange-traded options, and exchange-traded futures. Such products offer investors the opportunity to manage their volatility risks associated with an underlying asset class. Currently, most of the products focus on underlying equity indexes or equity-based portfolios. The Exchange proposes to introduce a cash-settled options contract on a new volatility index, which focuses on equity exposure using options on the NDX, which are actively traded equity option products. The Exchange believes that because the Volatility Index is derived from published NDX options prices, and given the immense liquidity found in the individual security components of NDX as well as the aggregate index market value of \$7.24 trillion, the concern that the Volatility Index will be subject to market manipulation is greatly reduced. Therefore, the Exchange believes that the proposed rule change to list options on the Volatility Index is appropriate.

The Exchange further notes that Phlx rules that apply to the trading of other index options currently traded on the Exchange would also apply to the trading of options on the Volatility Index. The Exchange proposes to utilize nickel and dime increments for trading the Volatility Index options. The Exchange believes that these trading increments will enable traders to make the most effective use of the product for trading and hedging purposes. Additionally, the trading of options on the Volatility Index would be subject to, among others, Exchange rules governing

margin requirements and trading halt procedures. Finally, the Exchange represents that it has an adequate surveillance program in place to detect manipulative trading in options on the Volatility Index. The Exchange also represents that it has the necessary systems capacity to support the new options series. And as stated in the filing, the Exchange has rules in place designed to protect public customer trading.

Phlx's proposal to initiate the Closing Settlement Period at 2 minutes after the underlying market opens is intended to permit the price of the underlying NDX component security to settle down and not flicker back and forth among prices after its opening. It is common for options to fluctuate in price immediately upon opening; such volatility reflects a natural uncertainty about the ultimate opening price of all Nasdaq-100 Index component stocks while the buy and sell interest is matched. The Exchange notes that this delay ensures more stability in the marketplace prior to initiating the settlement. The Exchange's decision to initiate the Closing Settlement Period at 2 minutes after the underlying market opens ensures that it has the ability for Market Makers to gain information and certainty after the underlying market has opened before submitting quotes. This 2 minute delay before the Closing Settlement Period commences permits Market Makers to submit informed quotes which the Exchange believes would be tighter given the added certainty. Market Makers provide necessary liquidity to the marketplace.

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

This proposed rule change does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange notes that the proposed rule change will facilitate the listing and trading of an index option product with a novel structure that will enhance competition among market participants, to the benefit of investors and the marketplace.

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 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 self-regulatory organization consents, the Commission will:

- (A) by order approve or disapprove the 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-2020-41 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-2020-41. 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 office 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-Phlx-2020-41, 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.²⁶

J. Matthew DeLesDernier
Assistant Secretary

²⁶ 17 CFR 200.30-3(a)(12).