SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-90573; File No. SR-Phlx-2020-41]

Self-Regulatory Organizations; Nasdaq PHLX LLC; Order Instituting Proceedings to
Determine Whether to Approve or Disapprove a Proposed Rule Change to List and Trade
Options on a Nasdaq-100 Volatility Index


I. Introduction

On August 24, 2020, Nasdaq PHLX LLC (“Exchange” or “Phlx”) filed with the
Securities and Exchange Commission (“Commission”), pursuant to Section 19(b)(1) of the
Securities Exchange Act of 1934 (“Act”)1 and Rule 19b-4 thereunder,2 a proposed rule change to
list and trade options on a Nasdaq-100 Volatility Index (“VOLQ” or “Volatility Index”). The
proposed rule change was published for comment in the Federal Register on September 8, 2020.3
On October 20, 2020, pursuant to Section 19(b)(2) of the Act,4 the Commission designated a
longer period within which to approve the proposed rule change, disapprove the proposed rule
change, or institute proceedings to determine whether to disapprove the proposed rule change.5
This order institutes proceedings under Section 19(b)(2)(B) of the Act6 to determine whether to
approve or disapprove the proposed rule change.

(“Notice”). Comment received on the Notice is available on the Commission’s website
Commission designated December 7, 2020 as the date by which the Commission shall
approve or disapprove, or institute proceedings to determine whether to disapprove, the
proposed rule change.
II. Description of and Comment on the Proposed Rule Change

A. Description of the Proposal

The Exchange proposes to list and trade options on VOLQ, a new index that measures changes in 30-day implied volatility of the Nasdaq-100 Index (“Nasdaq-100 Index” or “NDX”). As proposed, options on the VOLQ will be cash-settled and will have European-style exercise provisions. The Exchange states that the Volatility Index will measure “at-the-money” volatility. 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.7

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 will be for the nearest weekly expirations from the actual listing date, and the weekly expirations will not expire in the same week in which standard (monthly) Volatility Index options expire. Standard (monthly) expirations in the Volatility Index options will not be counted as part of the maximum six weekly expirations permitted for Volatility Index options.8 In addition, the Exchange proposes that long term option series having up to sixty months to expiration may be listed and traded.9

Volatility Index Design and Composition10

The Exchange states that the Volatility Index11 reflects changes in 30-day implied volatility. The calculation of the Volatility Index is based on the methodology developed by NShares LLC.

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7 The Exchange proposes to amend Phlx 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 Phlx Options 3, Section 3, “Minimum Increments” and Options 4A, Section 6, “Position Limits.”
8 See Phlx Options 4A, Section 12, Terms of Option Contracts, proposed new section (b)(viii)(A).
9 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.
10 For the Exchange’s complete description of the proposal, including more information about the Volatility Index calculation methodology, see Notice, supra note 3.
11 The calculation of the Volatility Index is based on the methodology developed by NShares LLC.
volatility, which measures the magnitude of changes of the underlying broad-based securities index, NDX. The Exchange further states that NDX includes 100 of the largest\textsuperscript{12} domestic and international non-financial companies listed on The Nasdaq Stock Market LLC based on market capitalization. According to the Exchange, the Volatility Index, which the Exchange considers a broad-based securities index pursuant to Phlx Options 4A, Section 2(a)(13),\textsuperscript{13} measures the expectation for market volatility over the next thirty calendar days as expressed by options on NDX. The Exchange explains that the Volatility Index uses the bid and offer prices of certain listed options on NDX\textsuperscript{14} to obtain the prices of synthetic precisely at-the-money (“ATM”) options, which are then used to calculate 30-day closed-form implied volatility. Finally, the 30-day closed-form implied volatility is multiplied by 100 to calculate the Volatility Index level. 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%.

The Exchange believes that the proposed product does not have single or aggregated component concentration risk. The Exchange states that the methodology caps each single component as well as the top five weighted components. The Exchange further states that no component security of the Volatility Index comprises more than 12.50% of the index’s weighting.

\textsuperscript{12} The Exchange reports that 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. The Exchange states that the Nasdaq-100 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.

\textsuperscript{13} Phlx 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. The Exchange states that, like the Cboe Volatility Index (“VIX”), VOLQ is an implied volatility index and not a realized volatility index.

\textsuperscript{14} For any calculation of synthetic precisely ATM option prices, a total of thirty-two component options are used, comprising four calls and four puts from each of four consecutive weeks.
and that the five weighted component securities of the Volatility Index in the aggregate do not comprise more than 43.75% of the index’s weighting.

**Index Calculation and Maintenance**

The Exchange states that 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 fifteen 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 will be calculated on the same day as the Volatility Index Options expiration date. The exercise settlement value of a Volatility Index option will 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 thirty days following that Wednesday is an Exchange holiday, the exercise settlement value will be calculated on the business day immediately preceding that Wednesday. The last trading day for a Volatility Index option will 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 will be the day immediately preceding the last regularly scheduled business day.¹⁵

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¹⁵ See Phlx Options 4A, Section 12, “Terms of Option Contracts,” proposed new section (b)(6)(B) and (C).
Monthly options on the Volatility Index will 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 will normally cease at 4:15 P.M. (New York time) on the Tuesday preceding an expiration Wednesday.

**Final Settlement**\(^{16}\)

The Exchange states that the final settlement price (Ticker Symbol: VOLS) will be calculated as described below on Wednesday commencing at 9:32:000 A.M. (New York time) on the expiration day, and continuing each second for the next 300 seconds ("Closing Settlement Period"). The exercise settlement amount will be equal to the difference between the final settlement price and the exercise price of the option, multiplied by $100. Exercise will 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 (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 options\(^{17}\) on the Exchange calculated at the opening of trading on the expiration date. As part of the Exchange’s calculation of the Closing VWAP, the Exchange will observe the number of contracts of the then-current NDX component options traded on Phlx at each price during individual one-second intervals of the Closing Settlement Period on the expiration day.\(^{18}\) If no transactions occur on Phlx in a NDX component option during any one-second observation period, the NBBO

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\(^{16}\) For a full description of the final settlement process, see Notice supra note 3.

\(^{17}\) The Exchange states that, dependent upon movement in the Nasdaq-100 Index, the thirty-two underlying NDX component options can change every second.

\(^{18}\) The Exchange calculates a volume weighted average price for each one-second observation period (a “One Second VWAP”) for each component option.
midpoint of each of the NDX component options for which a transaction has not occurred\textsuperscript{19} at the end of the one second observation period will be considered the One Second VWAP for that observation period for purposes of the settlement methodology. The NBBO midpoint will be the midpoint of the best bid and best offer from Phlx, ISE, and GEMX.\textsuperscript{20} 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.

The Exchange believes that the Volatility Index final settlement has exceedingly high hurdles for potential manipulation. First, the Exchange believes that market participants cannot predict which components will be included in the final settlement. Second, the Exchange believes that traders are subject to highly competitive market forces of deep and established market liquidity. For example, the Exchange notes that during each second of the final 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. Third, the Exchange states that 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. In support, the Exchange notes that 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

\textsuperscript{19} The Volatility Index’s component NDX options are listed on Phlx as well as on the Exchange’s affiliates, ISE and GEMX. The Exchange reports that 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%. The Exchange believes that this demonstrates quote stability at 2 minutes after the opening.

\textsuperscript{20} 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.
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 proposed 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. Options on the Index will be quoted and traded in U.S. dollars. Accordingly, the Exchange believes that 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 will have a minimum increment of $0.05 for options trading below $3.00 and $0.10 for all other series.

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.

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

22 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).

23 Phlx Options 4A, Section 12 “Terms of Option Contracts,” proposed new section (b)(6)(E).
Exchange proposes that there shall be no position or exercise limits for options on the Volatility Index.

The trading of options on the Volatility Index will be subject to the same rules that presently govern the trading of Exchange index options, including sales practice rules, margin requirements, and trading rules.\textsuperscript{24}

The Exchange represents that it 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. Additionally, the Exchange states that it is a member of the Intermarket Surveillance Group, through which it can coordinate surveillance and investigative information sharing in the stock and options markets with all of the U.S. registered stock and options markets. The Exchange believes that it is unlikely that the Volatility Index settlement value could be manipulated because the likelihood of gaming the components over a 300 second period is extremely low. Phlx believes that its surveillance procedures currently in place, coupled with additional measures,\textsuperscript{25} will allow it to adequately surveil for any potential

\textsuperscript{24} The Exchange states that Phlx Options 10, Section 6, which is designed to protect public customer trading, will apply to trading in options on the Volatility Index. Specifically, the rule 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 Customers,” and Phlx Options 10, Section 13, “Delivery of Options Disclosure Documents,” will also apply to trading in options on the Volatility Index.

\textsuperscript{25} See Notice, supra note 3.
manipulation in the trading of Volatility Index options. The Exchange also 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.

B. Comment on the Proposal

A commenter, who states it is the provider of the VOLQ methodology, expressed support for the proposal. The commenter states that VOLQ is a response to requests from market participants and that competition and innovation generated by VOLQ are in the public interest and will benefit investors.26

III. Proceedings to Determine Whether to Approve or Disapprove SR-Phlx-2020-41 and Grounds for Disapproval Under Consideration

The Commission is instituting proceedings pursuant to Sections 19(b)(2)(B) of the Act27 to determine whether the proposed rule change should be approved or disapproved. Institution of proceedings is appropriate at this time in view of the legal and policy issues raised by the proposed rule change. Institution of proceedings does not indicate that the Commission has reached any conclusions with respect to any of the issues involved. Rather, as described below, the Commission seeks and encourages interested persons to provide additional comment on the proposed rule change to inform the Commission’s analysis of whether to approve or disapprove the proposed rule change.

Pursuant to Section 19(b)(2)(B) of the Act,28 the Commission is providing notice of the grounds for possible disapproval under consideration. The Commission is instituting proceedings to allow for additional analysis of and input concerning the proposed rule change’s consistency with the Section 6(b)(5) of the Act, which requires, among other things, that the

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28 Id.
rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest.\textsuperscript{29}

IV. Procedure: Request for Written Comments

The Commission requests that interested persons provide written submissions of their views, data, and arguments with respect to the issues identified above, as well as any other concerns they may have with the proposal. In particular, the Commission invites the written views of interested persons concerning whether the proposal is consistent with Section 6(b)(5)\textsuperscript{30} of the Act or any other provision of the Act, or the rules and regulations thereunder. Although there do not appear to be any issues relevant to approval or disapproval that would be facilitated by an oral presentation of views, data, and arguments, the Commission will consider, pursuant to Rule 19b-4 under the Act,\textsuperscript{31} any request for an opportunity to make an oral presentation.\textsuperscript{32}

Interested persons are invited to submit written data, views, and arguments regarding whether the proposed rule change should be approved or disapproved by [insert date 21 days from publication in the Federal Register]. Any person who wishes to file a rebuttal to any other person’s submission must file that rebuttal by [insert date 35 days from publication in the Federal Register]. The Commission asks that commenters address the sufficiency of the Exchange’s statements in support of the proposal, which are set forth in the Notice,\textsuperscript{33} in addition to any other

\begin{footnotesize}
\textsuperscript{29} 15 U.S.C. 78f(b)(5).
\textsuperscript{31} 17 CFR 240.19b-4.
\textsuperscript{32} Section 19(b)(2) of the Act, as amended by the Securities Act Amendments of 1975, Pub. L. 94-29 (June 4, 1975), grants the Commission flexibility to determine what type of proceeding—either oral or notice and opportunity for written comments—is appropriate for consideration of a particular proposal by a self-regulatory organization. See Securities Act Amendments of 1975, Senate Comm. on Banking, Housing & Urban Affairs, S. Rep. No. 75, 94th Cong., 1st Sess. 30 (1975).
\textsuperscript{33} See Notice, supra note 3.
\end{footnotesize}
comments they may wish to submit about the proposed rule change. In this regard, the
Commission seeks commenters’ views regarding whether the Exchange’s proposal to list and
trade options on the Volatility Index, a new index that measures changes in 30-day implied
volatility of the Nasdaq-100 Index, is adequately designed to prevent fraudulent and
manipulative acts and practices, to promote just and equitable principles of trade, and to protect
investors and the public interest.

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 No. 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 No. SR-Phlx-2020-41. The 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 such
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 publicly available. All submissions should refer to File No. SR-Phlx-2020-41 and should be submitted on or before [INSERT DATE 21 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Rebuttal comments should be submitted by [INSERT DATE 35 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.34

J. Matthew DeLesDernier,

Assistant Secretary.

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34 17 CFR 200.30-3(a)(57).