September 12, 2024

Christopher J. Kirkpatrick
Secretary
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, D.C. 20581

Re: Cboe Futures Exchange, LLC Product and Rule Certification for Options on Cboe Volatility Index Futures
Submission Number CFE-2024-018

Dear Mr. Kirkpatrick:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended ("Act"), and Regulation 40.2 and Regulation 40.6 of the regulations promulgated by the Commodity Futures Trading Commission ("CFTC" or "Commission") under the Act, Cboe Futures Exchange, LLC ("CFE" or "Exchange") hereby submits terms and conditions for Options on Cboe Volatility Index Futures ("VX Options" or "Product") to be traded on CFE and accompanying rule amendments to incorporate the Product into CFE's rules ("Amendment").

The Amendment consists of new Chapter 26 of the CFE Rulebook regarding the Product and related revisions to other CFE rule provisions. A summary Product specifications chart for VX Options is included in Exhibit 1 to this submission. Exhibit 2 to this submission sets forth the rule changes included in the Amendment.

The terms and conditions for the Product and the Amendment will become effective on September 26, 2024 ("Effective Date"). The Product may be listed for trading on CFE on or after the Effective Date on a date to be announced by the Exchange through the issuance of an Exchange notice. CFE currently plans to list VX Options for trading commencing on October 14, 2024. CFE will notify the Commission if this currently planned initial listing date were to change.

VX Options are options on Cboe Volatility Index ("VX") futures. VX futures are cash-settled futures on the Cboe Volatility Index ("VIX Index").

VIX Index

The VIX Index is a financial benchmark designed to be an up-to-the-minute market estimate of expected volatility of the S&P 500 Index. The S&P 500 Index is a stock index that measures the performance of 500 of the largest companies listed on stock exchanges in the United States and is weighted by float-adjusted market capitalization. The intraday VIX Index measures the expected volatility of the S&P 500 Index by using real-time bid/ask quotes of options on the S&P 500 Index ("SPX options") listed for trading on Cboe Exchange, Inc. ("Cboe Options") (a national securities exchange). More specifically, the VIX Index is intended to provide an instantaneous measure of how much the market thinks the S&P 500 Index will fluctuate in the 30 days from the time of each tick of the VIX Index. The VIX Index is a forward looking measure, in contrast to realized (or actual) volatility, which measures the variability of historical (or known) prices.

Cboe Global Indices, LLC ("CGI") calculates the VIX Index using standard SPX options and weekly SPX options. The standard SPX options used generally expire on the third Friday of each month and the weekly SPX options used expire on all other Fridays. Only SPX options with Friday expirations are used to calculate the VIX Index. Additionally, only SPX options with more than 23 days and less than 37 days to the Friday SPX expiration are used to calculate the VIX Index. These SPX options are then weighted to yield a constant maturity 30-day measure of the expected volatility of the S&P 500 Index. In order to maintain a constant maturity of 30 days, the portfolio of SPX options comprising the VIX Index changes slightly every single minute. Accordingly, the VIX Index is calculated using a constantly changing portfolio of SPX options.

Intraday VIX Index values are based on snapshots of SPX option bid/ask quotes every 15 seconds and are intended to provide an estimate of expected volatility at particular points in time. As such, these VIX Index values are often referred to as "indicative" or "spot" values. CGI currently disseminates VIX Index spot values between 2:15 a.m. and 8:25 a.m., and between 8:30 a.m. and 4:15 p.m. according to the VIX Index formula. All times referenced in this filing are Chicago time.

The generalized formula used in the VIX Index calculation is:

$$\sigma^2 = \frac{2}{T}\sum_i \frac{\Delta K_i}{K_i^2} e^{RT} Q(K_i) - \frac{1}{T}\left[\frac{F}{K_0} - 1\right]^2$$

WHERE...

| | |
|---|---|
| $\sigma$ is | $VIX/100 \Rightarrow$ VIX = $\sigma \times 100$ |
| T | Time to expiration |
| F | Forward index level derived from index option prices |
| $K_0$ | First strike below the forward index level, F |
| $K_i$ | Strike price of $i^{th}$ out-of-the-money option; a call if $K_i>K_0$ and a put if $K_i< K_0$; both put and call if $K_i=K_0$. |
| $\Delta K_i$ | Interval between strike prices – half the difference between the strike on either side of $K_i$: $\Delta K_i = \frac{K_{i+1} - K_{i-1}}{2}$ (*Note*: $\Delta K$ for the lowest strike is simply the difference between the lowest strike and the next higher strike. Likewise, $\Delta K$ for the highest strike is the difference between the highest strike and the next lower strike.) |
| R | Risk-free interest rate to expiration |
| $Q(K_i)$ | The midpoint of the bid-ask spread for each option with strike $K_i$. |

The following materials may be referenced for additional detail and further information regarding the VIX Index and its methodology:

- Volatility Index Methodology: Cboe Volatility Index, as of August 26, 2024, which may be accessed at https://cdn.cboe.com/api/global/us_indices/governance/Volatility_Index_Methodology_Cboe_Volatility_Index.pdf; and

- Cboe Volatility Index Mathematics Methodology, as of May 11, 2022, which may be accessed at https://cdn.cboe.com/api/global/us_indices/governance/Cboe_Volatility_Index_Mathematics_Methodology.pdf.

The final settlement value of a VX future is determined by a Special Opening Quotation ("SOQ") of the VIX Index. The SOQ of the VIX Index is calculated based on a special opening auction conducted on Cboe Options on the final settlement date of the VX future which concludes at 8:30 a.m. on the final settlement date. There are several ways in which the calculation of the SOQ of the VIX Index differs from the calculation of the VIX Index at all other times. Among these differences are that:

- The SOQ calculation uses SPX options from a single expiration 30 calendar days from the final settlement date. Unlike the VIX Index calculation at other times, the SOQ calculation does not involve the interpolation of volatility calculated with near-term and next-term options.

- Unlike the VIX Index calculation at other times, the determination of the strike range used for the SOQ calculation does not depend on whether options with consecutive strikes have zero bid prices. Cboe Options determines and announces the strike range to be used in the SOQ calculation. It does so by using an algorithm to determine the call with the highest strike and the put with the lowest strike to be used in that calculation. The strike prices used in the SOQ calculation include all put options within the strike range that have a strike price < K0, all call options within the strike range that have a strike price > K0, and both the put and call options that have a strike price equal to K0. Options within the Cboe Options determined strike range with a zero-bid price are eligible to be included in the SOQ calculation, which also differs from the calculation of the VIX Index at other times.

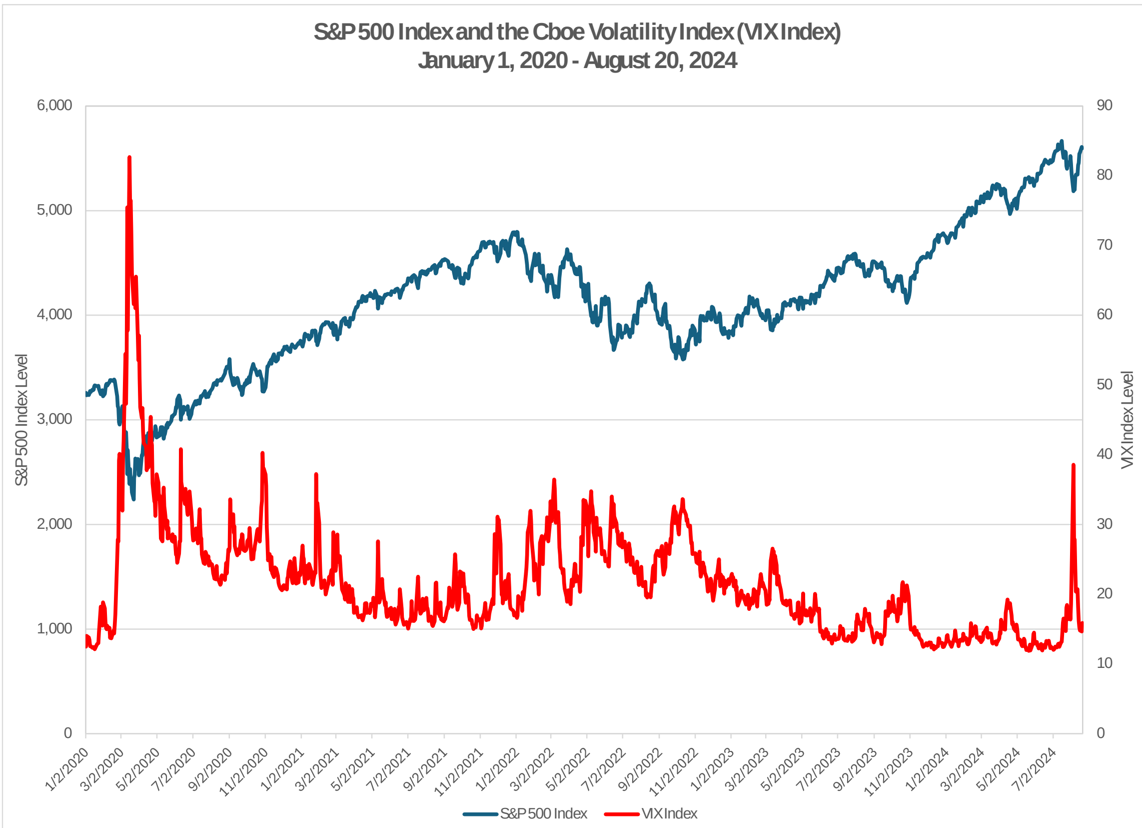
- The SOQ calculation uses the "opening trade price" of each of the constituent SPX options, as determined pursuant to Cboe Options rules during the special opening auction that Cboe Options conducts on the final settlement date. This approach is different from the midpoint prices that are used to calculate the VIX Index at all other times. In the event that there is no "opening trade price" for a constituent SPX option, the opening price used in the SOQ calculation is the midpoint price of the highest bid and lowest offer of that option at the time it opens.

The special opening auction process utilized in determining the SOQ is governed by Cboe Options rules. Related Cboe Options rules, including without limitation, Cboe Options Rule 5.31 (Opening Auction Process) and Cboe Options Rule 5.31(j) (Modified Opening Auction Process), may be found at https://cdn.cboe.com/resources/regulation/rule_book/C1_Exchange_Rule_Book.pdf. Further information regarding the determination of the SOQ that is utilized as the final settlement value for futures on the VIX Index, including VX futures, may be found at https://www.cboe.com/tradable_products/vix/faqs/. If the final settlement value for a VX future is not available or the normal settlement procedure cannot be utilized due to a trading disruption or other unusual circumstance, the final settlement value is determined in accordance with the rules and bylaws of The Options Clearing Corporation ("OCC").

The description above is intended to be a high level summary of the VIX Index and the process to determine the SOQ as of the date of this filing and the above information and the above-referenced documents regarding each may change over time.

Graphical Comparison

The graph below reflects the level of the S&P 500 Index in comparison to the level of the VIX Index during the time period from January 1, 2020 through August 20, 2024. The graph reflects how the VIX Index generally tends to be inversely correlated to the S&P 500 Index level. During the period from January, 1, 2020 through August 20, 2024, the daily return correlation between the S&P 500 Index and the VIX Index was -0.698.




VX Futures

VX Options are options on VX futures. VX futures are cash-settled futures on the VIX Index. VX futures are listed for trading on CFE and are cleared through OCC. VX futures have been offered for trading on CFE since March 26, 2004.

There is a robust and liquid market in VX futures.

During the time period from January 1, 2022 through August 20, 2024:

- 17,777 accounts traded VX futures.
- Over $145 billion in vega notional volume was traded in VX futures.
- The average daily trading volume in VX futures was 220,384 contracts per day representing an average daily trading value of $220.4 million in vega notional terms.

- On the highest volume trading day for VX futures during this time period on August 2, 2024, 818,040 VX futures were traded representing $818.0 million in vega notional terms.

- The average daily open interest in VX futures was 365,999 contracts per day.

During the time period from August 21, 2023 through August 20, 2024:

- The time weighted average bid-ask size at the top of the market for the front month VX futures contract was 337 contracts bid and 297 contracts offered.

- The time weighted average spread between the best bid and best offer in the front month VX futures contract was 0.051 index points.

Contract Specifications

As further described in the attached summary product specifications chart for VX Options and in new Chapter 26 of the CFE Rulebook, the contract specifications for VX Options include the following:

VX Options have European-style exercise, are physically settled, and have P.M. settlement.

The exercise of a VX Options contract results in the delivery of one underlying VX futures contract.

The VX futures contract that underlies a VX Options contract is the front month VX futures contract relative to the expiration date of the VX Options contract. The underlying front month VX futures contract for this purpose is the nearest monthly VX futures contract that expires on or after the business day following the expiration date of the VX Options contract. A monthly VX futures contract is a VX futures contract that generally expires on the third Wednesday of a month and for which the final settlement value is calculated utilizing standard SPX options that are A.M. settled.

CFE may list expirations of VX Options calls and puts on the front month VX futures contract relative to the expiration date of the applicable VX Options contract. The expirations may expire on any weekday or weekdays and there may be expirations on one, multiple, or all weekdays during a week or weeks. Because the VX futures contract that underlies a VX Options contract is the nearest monthly VX futures contract that expires on or after the business day following the expiration date of the VX Options contract, a VX Options contract will expire no later than the day before the expiration date of the underlying VX futures contract and will never expire on the expiration date of the underlying VX futures contract.

CFE may initially list in, at, and/or out-of-the money exercise (strike) prices and may add new strike prices for VX Options as it deems appropriate, including in response to market conditions. The minimum strike price interval for VX Options is 0.5 index points.

There will be regular trading hours in VX Options on business days Monday through Friday from 8:30 a.m. to 3:00 p.m. Trading hours for an expiring VX Options contract will end at 3:00 p.m. Chicago time on its expiration date.

Market orders will not be accepted by the Exchange for VX Options. Any market orders for VX Options received by the Exchange will be automatically rejected or canceled back to the sender.

VX Options prices are stated in index points and decimal format. The minimum increment for single leg prices, the individual legs of spreads, and the net prices of spreads in VX Options is 0.01 index points (equal to a dollar value per minimum increment of $10.00 per contract).

The allocation method for the trading of VX Options on CFE's trading system is price-time priority.

Block Trades are permitted in VX Options provided that they satisfy the requirements of CFE Rule 415 (Block Trades). The minimum Block Trade quantity for VX Options is 200 contracts if there is only one leg involved in the trade. If the Block Trade is executed as a spread transaction with multiple legs, each leg is required to have a minimum size of 100 contracts. The minimum price increment for Block Trades in VX Options is 0.005 index points.

Exchange of Contract for Related Position ("ECRP") transactions are also permitted in VX Options provided that they satisfy the requirements of CFE Rule 414 (Exchange of Contract for Related Position). These requirements include, among others, the requirement under Rule 414(b) that the related position must have a high degree of price correlation to the underlying of the VX Options transaction so that the VX Options transaction would serve as an appropriate hedge for the related position. The minimum price increment for an ECRP transaction involving VX Options is 0.005 index points.

Trade at Settlement ("TAS") transactions are not permitted in VX Options. VX Options will also not be listed on TAS contracts in VX futures.

Like other equity-related products, VX Options are subject to market-wide circuit breaker trading halt provisions under CFE Rule 417A (Market-Wide Trading Halts Due to Extraordinary Market Volatility). Rule 417A provides that CFE will halt trading in all CFE contracts subject to Rule 417A and not reopen trading in those contracts for specified time frames if there is a Level 1 (7%), Level 2 (13%), or Level 3 (20%) Market Decline. As is the case with VX futures, the minimum halt time period for VX Options following a Level 1 Market Decline is 10 minutes. A Market Decline is a decline in the price of the S&P 500 Index between 8:30 a.m. and 3:00 p.m. Chicago time on a trading day as compared to the closing price of the S&P 500 Index for the immediately preceding trading day.

CFE will also halt trading in a VX Options contract during any trading halt in the VX futures contract which underlies that VX Options contract.

The daily settlement price for a VX Options contract on each business day other than the expiration date of the VX Options contract is determined by CFE by utilizing a Cox-Ross-Rubinstein binomial tree model to derive the theoretical option price for that contract utilizing its theoretical volatility. CFE may in its sole discretion establish a daily settlement price for a VX Options contract that it deems to be a fair and reasonable reflection of the market if (i) a calculation of the theoretical option price for the VX Options contract calculated as described above is not available for use in determining the daily settlement price of the VX Options contract due to a system issue or other reason; (ii) CFE determines in its sole discretion that the theoretical option price for the VX Options contract calculated as described above is not a fair and reasonable reflection of the market; or (iii) there is a trading halt in the VX Options contract or other unusual circumstance at or around the scheduled close of trading hours for the VX Options contract on the applicable business day.

VX Options have European-style exercise. VX Options will be cleared through OCC. A VX Options contract may be exercised only on its expiration date in accordance with the Rules and By-Laws of OCC. Subject to the Rules and By-Laws of OCC, a VX Options contract that is in-the-money by $0.01 or more upon its expiration is automatically exercised on its expiration date and contrary exercise instructions are not permitted.

Clearing Members holding open positions in a VX Options contract at the expiration of the VX Options contract that are in-the-money will deliver or receive the underlying VX futures contract in accordance with the Rules and By-Laws of OCC. The exercise of VX Options and the delivery following exercise of underlying VX futures are governed by the Rules and By-Laws of OCC. Exercise of a VX Options contract results in the delivery on the following OCC business day of one underlying VX futures contract.

Exercise Settlement Value

The exercise settlement value of an expiring VX Options contract that is used to determine whether or not that VX Options contract is in-the-money upon its expiration is the daily settlement price of the VX futures contract that underlies the VX Options contract on the expiration date of the VX Options contract. The exercise settlement value is rounded to the nearest 0.01.

The daily settlement prices of VX futures are determined pursuant to CFE Rule 1202(p) (Daily Settlement Price). CFE recently updated the provisions of Rule 1202(p) in CFE rule certification filing number CFE-2024-013 dated July 19, 2024. CFE implemented the updated provisions of Rule 1202(p) effective on September 9, 2024 prior to the launch of trading in VX Options.

CFE Rule 1202(p) provides for the following five step hierarchy for determining the daily settlement price of a VX futures contract.

- Under the first step of the hierarchy, the daily settlement price of a VX futures contract is determined by using a volume weighted average price ("VWAP") if specified conditions are satisfied.
    - The VWAP is determined during a 60 second measurement interval prior to the daily settlement time, which is at 3:00 p.m. on a normal business day.
    - There need to be at least one qualifying transaction and at least 50 qualifying contracts traded in the VX futures contract during the measurement interval in order for a VWAP to be used as the daily settlement price for the VX futures contract.
    - The executions that qualify as qualifying transactions and qualifying contracts traded and that are included in the VWAP calculation are executions of simple orders, including simple order transactions that occur when simple orders execute against spread orders.

   - Executions of spread orders against other spread orders, TAS transactions, block trades, and ECRP transactions do not count as qualifying transactions and qualifying contracts traded and are not included in the VWAP calculation.

- If the specified conditions for utilizing a VWAP as the daily settlement price are not satisfied, the second step of the hierarchy is utilized. Under the second step in the hierarchy, the daily settlement price for a VX futures contract is the time weighted average price ("TWAP") of best bid and best offer midpoint values in the VX futures contract during a 60 second measurement interval prior to the daily settlement time, provided that the requirement in the third bullet point below is satisfied.

   - The TWAP for a VX futures contract is calculated using only subsegments of the measurement interval during which there is both a two-sided market in the VX futures contract and the spread between the best bid and best offer in the VX futures contract is 0.10 index points or less. All other subsegments of the measurement interval are ignored for the purpose of the TWAP calculation.

   - The midpoint values during qualifying subsegments are weighted in calculating the TWAP by the amount of time during those subsegments that each midpoint value existed.

   - In order for the TWAP to be used as the daily settlement price for a VX futures contract, the total length of the qualifying subsegments must be at least 50% of the measurement interval.

   - For purposes of determining the daily settlement price of a VX futures contract, a two-sided market refers to a market in a VX futures contract that simultaneously includes both a pending bid with a non-zero value and a pending offer with a non-zero value. If a two-sided market includes either no bid or no offer, it is not a two-sided market for these purposes.

- If the specified conditions for utilizing a TWAP of best bid and best offer midpoint values as the daily settlement price are not satisfied, the third step of the hierarchy is utilized. Under the third step of the hierarchy, the daily settlement price is the average of the bid and the offer from the last best two-sided market in the VX futures contract prior to the daily settlement time during the applicable business day which simultaneously includes both a pending bid with a non-zero value and a pending offer with a non-zero value.

- If there is not a two-sided market meeting the criteria of the third step in the hierarchy, the fourth step of the hierarchy provides that the daily settlement price utilized for the VX futures contract is the daily settlement price of the VX futures contract with the nearest expiration date in calendar days to the expiration date of the contract for which the daily settlement price is being determined.

   - In that event and if there are two VX futures contracts equidistant in calendar days to the contract for which the daily settlement price is being determined, the daily settlement price of the contract with the earlier expiration date is utilized.

- Under the fifth step of the hierarchy, the Exchange may in its sole discretion establish a daily settlement price for a contract that it deems to be a fair and reasonable reflection of the market under certain conditions. In particular, the Exchange may exercise this authority if it determines in its sole discretion that the daily settlement price established by the above parameters is not a fair and reasonable reflection of the market or if there is a trading halt in the contract or other unusual circumstance at or around the daily settlement time.

  - The Exchange may consider one or more of a number of different factors in determining whether a daily settlement price established by the above parameters is not a fair and reasonable reflection of the market.

  - One factor that may be considered in this regard is the no-bust range for VX futures. For purposes of Policy and Procedure III (Resolution of Error Trades) of the Policies and Procedures Section of the CFE Rulebook, the no-bust range for a VX futures contract is 10% on either side of the true market price of the contract as determined by the CFE Trade Desk.

  - How this and other factors may be applied in determining whether to exercise discretion to determine the daily settlement price, and what that daily settlement price will be in any particular instance if discretion is applied, may vary depending on applicable market conditions.

CFE expects that one of the first two steps of the above hierarchy will generally be used to determine the daily settlement price for the front month VX futures that underlie VX Options.

Like with other CFE products, the rules for VX Options provide that if the exercise settlement value for a VX Options contract is not available or the normal settlement procedure cannot be utilized due to a trading disruption or other unusual circumstance, the exercise settlement value will be determined in accordance with the Rules and Bylaws of OCC.

<u>Potential Uses of VX Options</u>

On a global basis, the VIX Index is one of the most recognized measures of expected stock market volatility. The VIX Index is widely reported by financial media and closely followed by a variety of market participants as a daily market indicator. VX futures are the most actively traded volatility index futures product in the world. The average daily trading volume in VX futures during the time period from January 1, 2022 through August 20, 2024 was 220,384 contracts per day. VX futures can provide the ability to, among other things, hedge, mitigate, or capitalize on broad U.S. stock market volatility. CFE believes that market participants may be able to utilize VX Options in the same manner.

In relation to portfolio hedging and diversification, one of the biggest risks to an equity portfolio is a broad market decline. The VIX Index generally tends to be inversely correlated with the S&P 500 Index. Consequently, a long exposure to volatility may be an offset against falling stock prices and there may be a diversification benefit to including volatility in an investment portfolio. VX Options are designed to deliver volatility exposure with optionality in a single, efficient package.

Like VX futures, VX Options may also provide market participants with the ability to express a bullish, bearish, or neutral outlook regarding the expected volatility of the S&P 500

Index. Expressing a long or short sentiment could involve entering into long or short positions in VX Options. Market participants could also enter into long or short positions in VX Options to seek to position a portfolio for potential increases or decreases in anticipated volatility of the broad U.S. stock market.

CFE previously offered options on VX futures for trading from September 2010 to June 2011. CFE believes that the current market environment is conducive to re-launching an options on VX futures product, particularly given interest in hedging event risks due to geopolitical events and economic events. VX futures have served as an important hedging tool for many different types of market participants. Because the VIX Index generally tends to be inversely correlated with the S&P 500 Index, VX futures may provide market participants with a mechanism to hedge their equity positions. CFE believes that VX Options may provide market participants with a similar hedging tool in the form of an options on futures product. Market participants may prefer to utilize an option on a future instead of a future given the attributes of an option versus a future and the particular financial objectives of the market participant.

Among the different market participants that may find VX Options to be useful are Commodity Trading Advisors ("CTAs"), proprietary trading firms, and other futures market participants. CTAs may find that VX Options may provide a means to tailor their exposure to event risk from near-term events. Proprietary trading firms may provide liquidity to other market participants that trade in VX Options; conduct trading strategies among VX Options, VX futures, options on the VIX Index ("VIX options") listed for trading on Cboe Options, and other financial instruments that seek to track the performance of the VIX Index; and conduct trading strategies relating to the term structure of expected volatility. Other futures market participants, such as those market participants that do not have the ability to trade in VIX options because they do not have a securities account or do not trade in securities products, may assume positions in VX Options as a way to gain exposure to the expected volatility of the U.S. stock market in the form of an option.

Broad-Based Security Index

CFE believes that the VIX Index continues to qualify as a broad-based security index pursuant to the Joint Order Excluding Indexes Comprised of Certain Index Options from the Definition of Narrow-Based Security Index Pursuant to Section 1a(25)(B)(vi) of the Commodity Exchange Act and Section 3(a)(55)(C)(vi) of the Securities Exchange Act of 1934, dated March 25, 2004, issued by the Securities and Exchange Commission ("SEC") and CFTC ("Commissions") (Securities Exchange Act Release No. 49469, 69 FR 16900 (March 31, 2004)) ("2004 Order"), as amended by the Joint Order issued by the Commissions on November 17, 2009 (Securities Exchange Act Release No. 61020, 74 FR 61116 (November 23, 2009)) ("2009 Order") (collectively, "Joint Order"), based on CFE's analysis and belief that the VIX Index satisfies all of the following conditions:

(1)(a) The VIX Index measures the magnitude of changes in the level of the S&P 500 Index over a defined period of time, which magnitude is calculated using prices of options on the S&P 500 Index (i.e., SPX options) and represents an annualized standard deviation of percent changes in the level of the S&P 500 Index.

(1)(b) CFE believes that the S&P 500 Index is a broad-based security index and is not a narrow-based security index as that term is defined in Section 1(a)(35) (previously Section 1(a)(25)) of the Act and Section 3(a)(55) of the Securities Exchange Act of 1934, as amended ("Exchange Act"). In particular, CFE believes that the S&P 500 Index satisfies the exclusion from the definition of a narrow-based security index based on CFE's analysis and belief that the S&P 500 Index satisfies all of the following conditions:

(1)(b)(i) The S&P 500 Index has more than 9 component securities. As of August 21, 2024, the number of component securities in the S&P 500 Index was 503.

(1)(b)(ii) No component security comprises more than 30% of the weighting of the S&P 500 Index. As of August 21, 2024, the highest weighted component security in the S&P 500 Index was the common stock of Apple Inc. and that component security comprised 6.92% of the weighting of the S&P 500 Index.

(1)(b)(iii) The five highest weighted component securities in the aggregate do not comprise more than 60% of the weighting of the S&P 500 Index. As of August 21, 2024, the five highest weighted component securities of the S&P 500 Index were the common stocks of Apple Inc., Microsoft Corporation, Nvidia Corporation, Amazon.com Inc., and Alphabet, Inc. (Class A) and those component securities comprised in the aggregate 25.96% of the weighting of the S&P 500 Index.

(1)(b)(iv) The lowest weighted component securities comprising, in the aggregate, 25% of the weighting of the S&P 500 Index have an aggregate dollar value of average daily trading volume of at least $30 million for an index with 15 or more component securities. From February 21, 2024 through August 20, 2024, the lowest weighted component securities comprising, in the aggregate, 25% of the weighting of the S&P 500 Index had an aggregate dollar value of average daily trading volume during the preceding 6 full calendar months of $93.11 billion.

(2) The VIX Index has more than 9 component securities, all of which are SPX options. As of August 21, 2024, the number of component securities in the VIX Index was 393.

(3) No component security of the VIX Index comprises more than 30% of the weighting of the VIX Index. As of August 21, 2024, there were two component securities in the VIX Index that were each the highest weighted component security in the VIX Index and that each had the same weighting in the VIX Index. Those two component securities were the 5630 SPX call and the 5630 SPX put with an expiration date of August 16, 2024. As of August 21, 2024, each of those component securities comprised 1.21% of the weighting of the VIX Index.

(4) The five highest weighted component securities of the VIX Index in the aggregate do not comprise more than 60% of the weighting of the VIX Index. As of August 21, 2024, the five highest weighted component securities of the VIX Index were the 5630 SPX call, 5630 SPX put, 6625 SPX put, 5635 SPX call, and 5620 SPX put with an expiration date of September 20, 2024 and those component securities comprised in the aggregate 5.92% of the weighting of the VIX Index.

(5) The lowest weighted component securities comprising, in the aggregate, 25% of the weighting of the S&P 500 Index have an aggregate dollar value of average daily trading volume of at least $30 million for an index with 15 or more component securities. From February 21, 2024 through August 20, 2024, the lowest weighted component securities comprising, in the aggregate, 25% of the weighting of the S&P 500 Index had an aggregate dollar value of average daily trading volume during the preceding 6 full

calendar months of $93.11 billion.

(6) SPX options are listed and traded on Cboe Options, a national securities exchange registered under Section 6 of the Exchange Act. Pricing information for the S&P 500 Index and SPX options is computed and disseminated in real-time through major market data vendors.

(7) The aggregate average daily trading volume in SPX options is at least 10,000 contracts calculated as of the preceding 6 full calendar months. The aggregate average daily trading volume in SPX options on Cboe Options is 3,086,683 contracts per day calculated from February 21, 2024 through August 20, 2024.

Option on a Future

Because the VX futures contract that underlies a VX Options contract is the nearest monthly VX futures contract that expires on or after the business day following the expiration date of the VX Options contract, a VX Options contract will expire no later than the day before the expiration date of the underlying monthly VX futures contract and will never expire on the expiration date of the underlying monthly VX futures contract. The time period between the expiration date of a VX Options contract and the expiration date of the underlying monthly VX futures contract can vary from multiple weeks, to multiple calendar days, to one calendar day.

In all of those situations, CFE believes that a VX Option is an option on a future and not an option on a security index.

The shortest time period that may exist between the expiration date of a VX Options contract and the expiration date of the underlying monthly VX futures contract is one calendar day. In that situation, a VX Option would expire at 3:00 p.m. on the calendar day before the expiration date of the underlying monthly VX futures contract (which would generally be on the Tuesday before the third Wednesday of a calendar month) and the underlying monthly VX futures contract would expire at 8:30 a.m. on its expiration date (which is generally on the third Wednesday of a calendar month).

Even in this situation, CFE believes that the VX Options contract is an option on a future based on, among other things, that:

- A VX Options contract is physically settled into a monthly VX futures contract and is not settled to a security index.

- The exercise settlement value of a VX Options contract is determined by the daily settlement price of the underlying monthly VX futures contract. A VX Options contract does not settle to a value of the VIX Index.

- The method of determining the exercise settlement value of a VX Options contract is materially different than the method of determining the final settlement value of a monthly VX futures contract. The exercise settlement value of a VX Options contract will be determined by pricing in the monthly VX futures contract on CFE through a daily settlement price determination process based on a hierarchy of determination criteria that include a VWAP of executions in the monthly VX futures contract, a TWAP of best bid and offer midpoint values in the monthly VX futures contract, and other criteria relating to the monthly VX futures contract, as is further described above. The final settlement value of a monthly VX futures contract is determined by an SOQ of the VIX Index which is calculated based on a special opening auction in SPX options conducted on Cboe Options, as is further described above.

- The exercise settlement value of a VX Options contract is determined at a different time than the time that the final settlement value of the underlying monthly VX futures contract is determined. In this situation, the exercise settlement value of the VX Options contract is determined at 3:00 p.m. on the calendar day prior to the expiration date of the monthly VX futures contract and the final settlement value of the underlying VX futures contract is determined at 8:30 a.m. on the expiration date of the monthly VX futures contract.

- The daily settlement price of a monthly VX futures contract on the calendar day prior to its expiration date may materially differ from the final settlement value of the VX futures contract, due to, for example, market moving events that occur during the time period between when these two values are determined. During the time frame from August 21, 2023 through August 20, 2024, the average absolute difference between the daily settlement price of a monthly VX futures contract on the calendar day prior to its expiration date and its final settlement value was 0.422 index points corresponding to an absolute dollar difference of $422.37 per contract. During this time frame, CFE used a daily settlement price determination process for VX futures that had differences between it and the one that will be applicable when VX Options are offered for trading. Nevertheless, CFE expects this point to continue to be applicable under the updated daily settlement price determination process for VX futures that will apply in determining the exercise settlement value for VX Options.

- In this situation, there are 16 trading hours in the monthly VX futures contract that take place between the time when the overlying VX Options contract expires and the time when trading hours terminate in the monthly VX futures contract prior to its expiration. These trading hours include the trading hours from 3:00 p.m. to 4:00 p.m. on the calendar day prior to the expiration date of the monthly VX futures contract and from 5:00 p.m. on that calendar day until 8:00 a.m. on the expiration date of the monthly VX futures contract.

- During the time frame from August 21, 2023 through August 20, 2024, the average trading volume during this 16 hour trading period each month in the expiring monthly VX futures contract was 6,153 contracts. This reflects that material trading activity can and does occur in the expiring monthly VX futures contract during this 16 hour trading period.

- CFE believes that there is existing precedent for options on futures that have European-style exercise, are physically settled, and have P.M. settlement which have a substantially similar expiration schedule to this situation. For example, CFE understands that Chicago Mercantile Exchange Inc. lists Options on E-mini Standard and Poor’s 500 Stock Price Index Futures (“ES options on futures”) with these features which expire at 3:00 p.m. on the calendar day prior to the expiration date of the underlying future and that the underlying future expires at 8:30 a.m. on its expiration date on the following calendar day (e.g., ES options on futures that expired on June 20, 2024).

- CFE believes that these factors reflect that, in this situation, there is material market risk after the expiration of the overlying VX Options contract relating to the monthly VX futures contract and to the monthly VX futures contract having a final settlement value that materially differs from the exercise settlement value of the VX Options contract. CFE also believes that these factors reflect that, in this situation, there is genuine futurity in the monthly VX futures contract between the time of the expiration of the VX Options contract and the time of the expiration of the VX futures contract.

Legal Conditions

CFE is an affiliate of CGI and of Cboe Options. CGI and Cboe Options each have ownership rights in relation to the VIX Index and settlement values relating products based on the VIX Index. CGI and Cboe Options are permitting CFE to list VX Options. Cboe Options also has a license with S&P Dow Jones Indices LLC ("S&P DJI"), pursuant to which CFE has any rights that it may require from S&P DJI to offer trading in VX Options.

CFE has undertaken a due diligence review of the legal conditions, including conditions that relate to contractual and intellectual property rights, which may materially affect the trading of the Product.

DCM Core Principles

CFE believes that the Product and Amendment are consistent with the Designated Contract Market ("DCM") Core Principles under Section 5 of the Act, including for the reasons described below. In particular, CFE believes that the Amendment is consistent with:

(i) DCM Core Principle 2 (Compliance with Rules) because CFE rules include prohibitions against market manipulation and fraudulent, non-competitive, and disruptive trading practices that will apply to trading activity in the VX Options and CFE will conduct monitoring and surveillance of trading in the VX Options for compliance with CFE rules;

(ii) DCM Core Principle 3 (Contracts Not Readily Susceptible to Manipulation) because, among other things:

- As described above, CFE believes that the VIX Index continues to satisfy the conditions to qualify as a broad-based security index under the Joint Order.

  In the 2004 Order, the Commissions stated that:

  > The Commissions believe that indexes satisfying these conditions are appropriately classified as broad based because they measure the magnitude of changes in the level of an underlying index that is a broad-based security index. In addition, the Commissions believe that futures contracts on indexes that satisfy the conditions of this exclusion should not be readily susceptible to manipulation because of the composition, weighting, and liquidity of the securities in the Underlying Broad-Based Security Index and the liquidity that the options comprising the index must have to qualify for the exclusion. Specifically, these factors should substantially reduce the ability to manipulate the price of a future on an index satisfying the conditions of the exclusion using the options

comprising the index or the securities comprising the Underlying Broad-Based Security Index. (2004 Joint Order, 69 FR 16900, 16901 (March 31, 2004)).

The sixth condition under the 2004 Joint Order is that:

> Options on the Underlying Broad-Based Security Index are listed and traded on a national securities exchange registered under section 6(a) of the Exchange Act.

The 2009 Joint Order provided for the following alternative condition to the sixth condition under the 2004 Joint Order:

> The index options used to calculate the magnitude of change in the level of the underlying broad-based security index are listed for trading on an exchange and pricing information for the underlying broad-based security index, and options on such index, is computed and disseminated in real-time through major market data vendors.

In addition to satisfying the sixth condition under the 2004 Joint Order and the other conditions under the 2004 Joint Order, the VIX Index also satisfies the alternative to the original sixth condition that is provided for under the 2009 Joint Order. The Commissions stated the following in the 2009 Joint Order with respect to volatility indexes that satisfy the alternative to the original sixth condition under the 2009 Joint Order as well as the other conditions of the 2004 Joint Order:

> The Commissions believe that, when pricing information for the index underlying a volatility index and for the index options that compose the volatility index is current, accurate, and publicly available, it would minimize the ability to manipulate the index options used to calculate the volatility index. As a result, futures contracts on such a volatility index would not be readily susceptible to manipulation. (2009 Joint Order, 74 FR 61116, 61117 (November 23, 2009)).

- The daily settlement price determination process for VX futures which will be utilized to determine the exercise settlement value for VX Options is designed in a manner that is intended to produce a price that is representative of the market value of the underlying VX future and to not be readily susceptible to manipulation. Among other things, this process is based on a hierarchy of determination criteria in which the first two steps in the hierarchy are a VWAP of executions in a VX futures contract over a 60 second measurement interval with a required minimum of 50 contracts traded in that VX futures contract during the measurement interval in order for the VWAP to be used as the daily settlement price and a TWAP of best bid and offer midpoint values in the VX futures contract over a 60 second measurement interval with a required maximum two-sided market spread of 0.10 index points for at least 50% of the measurement interval in order for the TWAP to be used as the daily settlement price. CFE expects that one of these first two steps of the hierarchy will generally be used to determine the daily settlement price for the front month VX futures that underlie VX Options.

- VX Options are subject to position accountability and position aggregation under CFE Rule 412A (Position Accountability) and new CFE Rule 2602(g) (Position Accountability). As further described below, the Amendment is initially establishing position accountability levels for VX Options that are incorporated within the current collective position accountability levels for VX futures and Mini Cboe Volatility Index ("VXM") futures. Under this initial framework, the current collective position accountability levels for VX futures and VXM futures collectively apply to positions in VX futures, VXM futures, and VX Options.

- CFE believes that the liquidation of VX futures contracts acquired through the exercise of VX Options will not adversely affect the orderly liquidation of VX futures positions and will not increase the susceptibility of VX futures to manipulation. Among other things, CFE notes in this regard that:

  - A robust and liquid market exists in VX futures with a demonstrated ability to handle higher trading volumes during periods of high demand for trading in VX futures. During the time period from January 1, 2022 through August 20, 2024:

    - The average daily trading volume in VX futures was 220,384 contracts per day representing an average daily trading value of $220.4 million in vega notional terms.

    - On the highest volume trading day for VX futures during this time period on August 2, 2024, 818,040 VX futures were traded representing $818.0 million in vega notional terms.

  - Hedging and arbitrage opportunities exist in trading between VX futures, VX Options, SPX options, and Cboe Volatility Index ("VIX") options traded on Cboe Options. Liquidity providers and other market participants may hedge positions they assume in VX futures with these related instruments. Additionally, arbitrage opportunities exist between the products that contribute to keeping prices consistent across these related markets.

- CFE plans to put a lead market maker program in place in VX Options with appointed liquidity providers that have market performance benchmarks in VX Options and which are designed to promote liquidity in VX Options

- CFE has rules that prohibit fraudulent, manipulative, and disruptive trading practices that will apply to trading in VX Options, including among others, CFE Rule 601 (Fraudulent Acts), CFE Rule 603 (Market Manipulation), CFE Rule 604 (Adherence to Law), CFE Rule 620 (Disruptive Practices), and Policy and Procedure XVIII (Disruptive Trading Practices) of the Policies and Procedures Section of the CFE Rulebook. Activity encompassed by these rules includes prohibited activity that occurs directly through any trading, practice, or conduct in a CFE product or indirectly through any trading, practice, or conduct in the market of any commodity, security, index, or benchmark underlying a CFE product, regardless of the exchange on or market in which the underlying is transacted. Accordingly, these rules will apply to any prohibited activity under those rules that could occur directly through activity in VX Options and to any prohibited activity under those rules that could occur indirectly in transactions in VX futures or transactions in SPX options utilized in the calculation of the VIX Index.

- CFE Regulation will surveil for potential manipulation of VX Options. Additionally, Cboe Options Regulation performs cross-market reviews related to SPX options, VIX options, and VX futures and will do so in relation to VX Options. Cboe Options and CFE are parties to an information sharing agreement that allows for information sharing between Cboe Options and CFE, including in relation to these cross-market reviews.

- CFE also represents that, to ensure the usefulness of VX Options, CFE, among other things: (i) conducted market research so that the design of VX Options meets the risk management needs of prospective users and promotes price discovery and (ii) consulted with market users and obtained their views and opinions during the contract design process to ensure that:

    - the terms and conditions of VX Options reflect the market for underlying VX futures and the anticipated volatility of the broad U.S. stock market; and

    - VX Options will perform the intended risk management and/or price discovery functions.

(iii) DCM Core Principle 4 (Prevention of Market Disruption) because, among other things, the following will contribute toward reducing the potential risk of price distortions and market disruptions in the VX Options:

- the trading halt provisions applicable to VX Options, which halt trading in VX Options during a market-wide circuit breaker trading halt and halt trading in a VX Options contract during any trading halt in the VX futures contract which underlies that VX Options contract; and

- CFE risk controls that will apply to VX Options, including CFE risk controls under CFE Rule 513A (Risk Controls) that include, among others, risk controls relating to maximum order size, price reasonability, order rates, and notional value of executions as well as other risk controls that will be available to utilize for VX Options such as other options risk monitor mechanism parameters as well as kill switch and disconnection risk controls.

(iv) DCM Core Principle 5 (Position Limitations or Accountability) because, among other things:

VX Options are subject to position accountability and position aggregation under CFE Rule 412A and new CFE Rule 2602(g). The Amendment is initially establishing position accountability levels for VX Options that are incorporated within the current collective position accountability levels for VX futures and VXM futures. Under this initial framework, positions in VX futures, VXM futures, and VX Options are aggregated when calculating the size of a Person's position for purposes of applying these position accountability provisions as further described below. Because these position accountability provisions collectively apply to VX futures, VXM futures, and VX Options, CFE is also amending CFE Rule 1202(d) (Position Accountability) and CFE Rule 1702(d) (Position Accountability) regarding the position accountability levels for VX futures and VXM futures to incorporate the revisions necessary to collectively apply those position accountability levels to VX futures, VXM futures, and VX Options.

Specifically, the position accountability requirements set forth in Rule 412A apply if a Person (i) owns or controls at any time more than the number of contracts net long or net short in all VX and VXM futures contracts and all VX Options contracts combined that in the aggregate would exceed the equivalent of 50,000 VX futures contracts; (ii) owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures contracts and all VX Options contracts on the expiring VX futures contract combined that in the aggregate would exceed the equivalent of 30,000 VX futures contracts, commencing at the start of trading hours for the Friday prior to the final settlement date of the expiring VX futures contract; or (iii) owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures contracts and all VX Options contracts on the expiring VX futures contract combined that in the aggregate would exceed the equivalent of 10,000 VX futures contracts, commencing at the start of trading hours for the business day immediately preceding the final settlement date of the expiring VX futures contract.

For these purposes, the start of trading hours for the Friday prior to the final settlement date of an expiring VX futures contract and the start of trading hours for the business day immediately preceding the final settlement date of an expiring VX futures contract is deemed to occur upon commencement of the first period of extended trading hours for the trading session for that business day.

One VXM futures contract is deemed to be equivalent to one tenth (0.10) of one VX futures contract for purposes of applying the position accountability levels for VX and VXM futures contracts and VX Options contracts.

The Exchange will disseminate a delta value for each VX Options contract for each CFE business day. A delta value is a calculation of the expected change in the price of a VX Options contract given a $1.00 change in the price of the VX futures contract which underlies that VX Options contract. For purposes of applying the position accountability levels for VX and VXM futures contracts and VX Options contracts, the size of a VX Options contract is deemed to be equivalent to the percentage of one VX futures contract which underlies that VX Options contract represented by the delta value of the VX Options contract (i.e., futures equivalent). A long call/short put VX Options position is treated as equivalent to a long VX futures position for this purpose and a long put/short call VX Options position is treated as equivalent to a short VX futures position for this purpose.

For example, if a Person owns a net long position of 5,000 VX futures, a long call position of 1,000 contracts in a VX Options contract with a delta value of 0.5, and a short call position of 8,000 contracts in another VX Options contract with a delta value of -0.25, the Person would be deemed to own a net long position of 3,500 VX futures (5,000 + (1,000 x 0.5) + (8,000 x (-0.25))) for purposes of applying the position accountability levels for VX and VXM futures contracts and VX Options contracts.

Rule 412A requires that a Person provide notice to the Exchange within designated time periods prior to and/or after exceeding a position accountability level.

If a position exceeds a position accountability level as a result of a VX Options assignment, the Person that owns or controls that position is allowed one business day to liquidate the excess position before that position is considered to be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position.

Additionally, if, at the close of trading on a business day, a position that includes VX Options exceeds a position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for that business day, but does not exceed the position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for the previous business day, then the position shall not be considered be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position.

Accordingly, the Amendment establishes appropriate initial position accountability levels for the VX Options that will serve to reduce the potential for market manipulation in VX Options in light of, among other things, that the current collective position accountability levels for VX futures and VXM futures will collectively apply to VX futures, VXM futures, and VX Options; the broad-based nature of the S&P 500 Index; and the aggregate notional volatility exposure of SPX options, VX futures, VIX options, and related products. The VIX Index is a financial benchmark designed to be an up-to-the-minute market estimate of expected volatility of the S&P 500 Index. A position equivalent to 50,000 VX futures contracts would equate to approximately $50 million in vega notional terms. This exposure is a small (5.1%) percentage of the aggregate average daily vega notional amount of approximately $983.3 million traded through SPX options, VX futures, VXM futures, VIX options, and options on the SPDR S&P 500 ETF Trust from February 21, 2024 through August 20, 2024. Additionally, this percentage does not take into account the additional significant average daily vega notional traded through options on E-mini S&P 500 Index futures if included.

Any future changes to the position accountability levels or provisions for VX futures, VXM futures, and/or VX Options would be done through a subsequent rule amendment submission to the Commission.

(v) DCM Core Principle 6 (Emergency Authority) in that CFE has rule provisions, including CFE Rule 418 (Emergencies), that provide CFE with the ability to exercise emergency authority as necessary and appropriate which will apply to trading in VX Options;

(vi) DCM Core Principle 7 (Availability of General Information) because the chart that summarizes the product specifications for VX Options will be posted and maintained on CFE’s website;

(vii) DCM Core Principle 8 (Daily Publication of Trading Information) in that volume, open interest, delta values, daily settlement prices, exercise settlement prices, and other price information for the Product will be made available publicly on a daily basis on CFE’s website consistent with Commission Regulation 16.01;

(viii) DCM Core Principle 9 (Execution of Transactions) because CFE will make VX Options available for trading on CFE’s trading system which provides for a competitive, open, and efficient market and mechanism for executing transactions that protects the price discovery process of trading on CFE’s centralized market;

(ix) DCM Core Principle 10 (Trade Information) in that CFE will maintain trade information for VX Options as part of its audit trail and this information will be accessible to CFE Regulation for regulatory surveillance and enforcement purposes;

(x) DCM Core Principle 11 (Financial Integrity of Transactions) because VX

Options will be cleared by OCC, which is registered with the Commission as a Derivatives Clearing Organization ("DCO") and is subject to the provisions of the Act and CFTC regulations relating to DCOs;

(xi) DCM Core Principle 12 (Protection of Markets and Market Participants) in that CFE rules include prohibitions against abusive practices, including abusive practices committed by a party acting as an agent for a participant, that will apply in relation to VX Options;

(xii) DCM Core Principle 13 (Disciplinary Procedures) because CFE maintains disciplinary procedures and rules that authorize the Exchange to discipline market participants that commit CFE rule violations, including any rule violations relating to VX Options;

(xiii) DCM Core Principle 14 (Dispute Resolution) in that Chapter 8 (Arbitration) of the CFE Rulebook provides a mechanism for market participants to arbitrate disputes that arise out of transactions executed on or subject to the rules of the Exchange, including transactions in VX Options;

(xiv) DCM Core Principle 18 (Recordkeeping) because CFE's recordkeeping procedures, established pursuant to Commission Regulation 1.31, will apply with respect to Exchange records relating to VX Options, including trade records and investigatory and disciplinary files;

(xv) DCM Core Principle 19 (Antitrust Considerations) in that the listing of VX Options will promote competition with other products utilized as a mechanism to manage expected volatility risk; and

(xvi) DCM Core Principle 20 (System Safeguards) in that CFE maintains system safeguards controls and procedures for its operations and automated systems that will be utilized to facilitate trading in VX Options.

CFE believes that the impact of the Product and Amendment will be beneficial to the public and market participants. CFE is not aware of any substantive opposing views to the Product and Amendment. CFE hereby certifies that the Product and Amendment comply with the Act and the regulations thereunder. CFE further certifies that CFE has posted a notice of pending certification with the Commission and a copy of this submission on CFE's website (http://www.cboe.com/us/futures/regulation/rule_filings/cfe/) concurrent with the filing of this submission with the Commission.

Contact Information

Questions regarding this submission may be directed to Arthur Reinstein at (312) 786-7570 and Shane Wilkerson at (484) 798-9350. Please reference our submission number CFE-2024-018 in any related correspondence.

Cboe Futures Exchange, LLC

/s/ Laura Fuson

By: Laura Fuson
Managing Director

**EXHIBIT 1**

**Summary Product Specifications Chart**
**for Options on Cboe Volatility Index Futures**

| | |
|---|---|
| **CONTRACT NAME:** | Options on Cboe Volatility Index Futures ("VX Options") |
| **LISTING DATE:** | |
| **DESCRIPTION:** | VX Options are options on Cboe Volatility Index ("VX") futures. VX futures are cash-settled futures on the Cboe Volatility Index ("VIX Index").<br><br>The VIX Index is a financial benchmark designed to be an up-to-the-minute estimate of expected volatility of the S&P 500 Index that is calculated by using real-time prices of S&P 500 Index ("SPX") options listed on Cboe Exchange, Inc. ("Cboe Options"). Further information regarding the calculation of the VIX Index may be found in the Volatility Index Methodology: Cboe Volatility Index and in the Cboe Volatility Index Mathematics Methodology.<br><br>VX Options have European-style exercise, are physically settled, and have P.M. settlement. The VX futures contract that underlies a VX Options contract is the front month VX futures contract relative to the expiration date of the VX Options contract.<br><br>The underlying front month VX futures contract for this purpose is the nearest monthly VX futures contract that expires on or after the business day following the expiration date of the VX Options contract. A monthly VX futures contract is a VX futures contract that generally expires on the third Wednesday of a month and for which the final settlement value is calculated utilizing standard SPX options that are A.M. settled.<br><br>The symbology for a VX Options contract denotes the expiration date of the VX Options contract and which VX futures contract underlies that VX Options contract.<br><br>The exercise of a VX Options contract results in the delivery of one underlying VX futures contract. |
| **TICKER SYMBOLS:** | Each VX Options contract has an identifier consisting of the following characters:<br><br>• the first two characters (UX) represent an option on the front month VX futures contract relative to the expiration date of the VX Options contract;<br>• the third and fourth characters (an integer and a letter) represent the number of the occurrence (1 for first occurrence, 2 for second occurrence, 3 for third occurrence, 4 for fourth occurrence, or 5 for fifth occurrence) of the day of the week (A for Monday, B for Tuesday, C for Wednesday, D for Thursday, or E for Friday) within a month that is the expiration date of the VX Options contract (e.g., 1A for a VX Options contract with |

<table>
<tr><td></td><td>an expiration date on the first Monday of a month or 3E for a VX Options contract with an expiration date on the third Friday of a month);
<ul>
<li>a slash;</li>
<li>the first character after the slash is the contract month code for the expiration month of the VX futures contract that underlies the VX Options contract (e.g., U for September); and</li>
<li>the second character after the slash is the last integer of the year of the expiration date of the VX futures contract that underlies the VX Options contract (e.g., 4 for 2024).</li>
</ul>
The identifier for a VX Options contract also includes a character to indicate whether the contract is a call (reflected by a C) or a put (reflected by a P) and the exercise (strike) price level.<br><br>
For example, a UX4B/Z4 C15 is a VX Options call with an exercise (strike) price of 15 that expires on the fourth Tuesday of the month (in this case on Tuesday, November 26, 2024) for which the underlying futures contract is the monthly December VX futures contract (with a final settlement date on December 18, 2024).</td></tr>
<tr><td>CONTRACT SIZE:</td><td>One underlying VX futures contract</td></tr>
<tr><td>CONTRACT EXPIRATIONS:</td><td>The Exchange may list expirations of VX Options calls and puts on the front month VX futures contract relative to the expiration date of the applicable VX Options contract. The expirations may expire on any weekday or weekdays and there may be expirations on one, multiple, or all weekdays during a week or weeks. The weekday of the expiration of a VX Options contract is specified in the symbology for the contract.</td></tr>
<tr><td>EXERCISE (STRIKE) PRICES:</td><td>The Exchange may initially list in, at, and/or out-of-the money exercise (strike) prices and may add new strike prices as it deems appropriate, including in response to market conditions.<br><br>
The minimum exercise (strike) price interval is 0.5 index points.</td></tr>
<tr><td>TRADING HOURS:</td><td><table>
<tr><th>Type of Trading Hours</th><th>Monday – Friday</th></tr>
<tr><td>Regular</td><td>8:30 a.m. to 3:00 p.m.</td></tr>
</table>
Market Orders will not be accepted by the Exchange for VX Options. Any Market Orders for VX Options received by the Exchange will be automatically rejected or canceled back to the sender.<br><br>
All times referenced are Chicago time.</td></tr>
<tr><td>TRADING PLATFORM:</td><td>CFE System</td></tr>
<tr><td>PRICING CONVENTIONS:</td><td>VX Options prices are stated in index points and decimal format.</td></tr>
<tr><td>MINIMUM PRICE INTERVALS:</td><td>The minimum increment for single leg prices, the individual legs of spreads, and the net prices of spreads in VX Options is 0.01 index points (equal to $10.00 per contract).</td></tr>
<tr><td>DOLLAR VALUE PER</td><td>$10.00 per contract (based on the contract multiplier for VX futures</td></tr>
</table>

| | |
|---|---|
| **TICK** | of $1,000). |
| **EXERCISE STYLE:** | European. A VX Options contract may be exercised only on its expiration date in accordance with the Rules and By-Laws of The Options Clearing Corporation ("OCC"). Subject to the Rules and By-Laws of OCC, a VX Options contract that is in-the-money by $0.01 or more upon its expiration is automatically exercised on its expiration date and contrary exercise instructions are not permitted. |
| **TRADE AT SETTLEMENT TRANSACTIONS:** | Trade at Settlement ("TAS") transactions are not permitted in VX Options. VX Options will also not be listed on TAS contracts in VX futures. |
| **CROSSING:** | The eligible size for an original Order that may be entered for a cross trade with one or more other original Orders pursuant to Rule 407 is one contract. The Trading Privilege Holder or Authorized Trader, as applicable, must expose to the market for at least five seconds under Rule 407(a) at least one of the original Orders that it intends to cross. |
| **PRE-EXECUTION DISCUSSIONS** | The Order Exposure Period under Policy and Procedure IV before an Order may be entered to take the other side of another Order with respect to which there has been pre-execution discussions is five seconds after the first Order was entered into the CFE System. |
| **EXCHANGE OF CONTRACT FOR RELATED POSITION TRANSACTIONS:** | Exchange of Contract for Related Position ("ECRP") transactions may be entered into with respect to VX Options. Any ECRP transaction must satisfy the requirements of CFE Rule 414.<br><br>The minimum price increment for an ECRP transaction involving VX Options is 0.005 index points. |
| **BLOCK TRADES:** | The minimum Block Trade quantity for VX Options is 200 contracts if there is only one leg involved in the trade. If the Block Trade is executed as a spread transaction with legs in multiple VX Options contracts, each leg is required to have a minimum size of 100 contracts.<br><br>The minimum price increment for Block Trades in VX Options is 0.005 index points. |
| **NO-BUST RANGE:** | The CFE error trade policy may only be invoked for a trade price that is higher or lower than the true market price of the applicable VX Options contract by an amount that is larger than the greater of the following three amounts:<br><br>(i) the delta value of the VX Options contract at the relevant time as determined by the Exchange multiplied by the no-bust range for the VX futures contract which underlies the VX Options contract;<br><br>(ii) 20% of the true market price of the VX Options contract up to 25% of the no-bust range for the VX futures contract which underlies the VX Options contract; and<br><br>(iii) 10 minimum price increments for the VX Options contract. |

| | |
|---|---|
| | In accordance with Policy and Procedure III, the Trade Desk will determine what the true market price for the VX Options contract was immediately before the potential error trade occurred. In making that determination, the Trade Desk may consider all relevant factors, including the last trade price for such Contract, a better bid or offer price, a more recent price in a different series, the prices of related contracts trading in other markets and the theoretical value of the VX Options contract as determined by the Exchange. |
| **TERMINATION OF TRADING:** | Trading hours in an expiring VX Options contract end at 3:00 p.m. Chicago time on its expiration date. |
| **POSITION ACCOUNTABILITY:** | VX Options are subject to position accountability and position aggregation under CFE Rule 412A.<br><br>A Person is subject to the position accountability requirements set forth in Rule 412A if the Person (i) owns or controls at any time more than the number of contracts net long or net short in all VX and VXM futures contracts and all VX Options contracts combined that in the aggregate would exceed the equivalent of 50,000 VX futures contracts; (ii) owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures contracts and all VX Options contracts on the expiring VX futures contract combined that in the aggregate would exceed the equivalent of 30,000 VX futures contracts, commencing at the start of trading hours for the Friday prior to the final settlement date of the expiring VX futures contract; or (iii) owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures contracts and all VX Options contracts on the expiring VX futures contract combined that in the aggregate would exceed the equivalent of 10,000 VX futures contracts, commencing at the start of trading hours for the Business Day immediately preceding the final settlement date of the expiring VX futures contract.<br><br>For purposes of this Rule, the start of trading hours for the Friday prior to the final settlement date of an expiring VX futures contract and the start of trading hours for the Business Day immediately preceding the final settlement date of an expiring VX futures contract shall occur upon commencement of the first period of extended trading hours for the trading session for that Business Day.<br><br>One VXM futures contract shall be deemed to be equivalent to one tenth (0.10) of one VX futures contract for purposes of applying the position accountability levels for VX and VXM futures contracts and VX Options contracts.<br><br>The Exchange will disseminate a delta value for each VX Options contract for each CFE Business Day. A delta value is a calculation of the expected change in the price of a VX Options contract given a $1.00 change in the price of the VX futures contract which |

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|---|---|
| | underlies that VX Options contract. For purposes of applying the position accountability levels for VX and VXM futures contracts and VX Options contracts, the size of a VX Options contract shall be deemed to be equivalent to the percentage of one VX futures contract which underlies that VX Options contract represented by the delta value of the VX Options contract (i.e., futures equivalent). A long call/short put VX Options position is treated as equivalent to a long VX futures position for this purpose and a long put/short call VX Options position is treated as equivalent to a short VX futures position for this purpose.<br><br>For example, if a Person owns a net long position of 5,000 VX futures, a long call position of 1,000 contracts in a VX Options contract with a delta value of 0.5, and a short call position of 8,000 contracts in another VX Options contract with a delta value of -0.25, the Person would be deemed to own a net long position of 3,500 VX futures (5,000 + (1,000 x 0.5) + (8,000 x (-0.25))) for purposes of applying the position accountability levels for VX and VXM futures contracts and VX Options contracts.<br><br>If a position exceeds a position accountability level as a result of a VX Options assignment, the Person that owns or controls that position shall be allowed one Business Day to liquidate the excess position before that position is considered to be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position pursuant Rule 412A. Additionally, if, at the close of trading on a Business Day, a position that includes VX Options exceeds a position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for that Business Day, but does not exceed the position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for the previous Business Day, then the position shall not be considered be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position pursuant to Rule 412A. Notwithstanding the foregoing, the other of the provisions of Rule 412A, including without limitation the provisions of Rule 412A(e) shall remain applicable in both of the situations described in this paragraph. |
| **MINIMUM REPORTABLE LEVEL:** | 200 contracts. |
| **EXPIRATION DATE:** | The symbology for a VX Options contract denotes the expiration date of the VX Options contract. |
| **EXERCISE SETTLEMENT VALUE:** | The exercise settlement value of an expiring VX Options contract is the daily settlement price of the VX futures contract that underlies the VX Options contract on the expiration date of the VX Options contract. The daily settlement prices of VX futures are determined pursuant to CFE Rule 1202(p).<br><br>The exercise settlement value is rounded to the nearest 0.01. |

| | |
|---|---|
| | If the exercise settlement value is not available or the normal settlement procedure cannot be utilized due to a trading disruption or other unusual circumstance, the exercise settlement value will be determined in accordance with the Rules and Bylaws of OCC. |
| **SETTLEMENT AT EXPIRATION:** | Subject to the Rules and By-Laws of OCC, VX Options contracts that are in-the-money by $0.01 or more upon their expiration are automatically exercised and contrary exercise instructions are not permitted. |
| **EXERCISE AND DELIVERY:** | The exercise of VX Options and the delivery following exercise of underlying VX futures are governed by the Rules and By-Laws of OCC.<br><br>Exercise of a VX Options contract results in the delivery on the following OCC business day of one underlying VX futures contract. |

**EXHIBIT 2**

The Amendment, marked to show additions in underlined text and deletions in ~~stricken~~ text, consists of the following:

* * * * *

**Cboe Futures Exchange, LLC**
**Rulebook**

* * * * *

**1202. Contract Specifications**

(a) - (c) No changes.

(d) *Position Accountability*. VX futures are subject to position accountability and position aggregation under CFE Rule 412A.

~~The position accountability levels for VX futures are~~ A Person is subject to the position accountability requirements set forth in Rule 412A if the Person:

(i) ~~ownership or control~~ owns or controls at any time ~~of~~ more than the number of contracts net long or net short in all VX and VXM futures Contracts and all VX Options Contracts combined that in the aggregate would exceed the equivalent of 50,000 VX futures contracts;

(ii) ~~ownership or control of~~ owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures Contracts and all VX Options Contracts on the expiring VX futures Contract combined that in the aggregate would exceed the equivalent of 30,000 VX futures contracts, commencing at the start of trading hours for the Friday prior to the final settlement date of the expiring VX ~~future~~ futures Contract; or

(iii) ~~ownership or control of~~ owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures Contracts and all VX Options Contracts on the expiring VX futures Contract combined that in the aggregate would exceed the equivalent of 10,000 VX futures contracts, commencing at the start of trading hours for the Business Day immediately preceding the final settlement date of the expiring VX ~~future~~ futures Contract. ~~One VXM futures contract shall be deemed to be equivalent to one tenth (0.10) of one VX futures contract for this purpose.~~

For purposes of this Rule, the start of trading hours for the Friday prior to the final settlement date of an expiring VX ~~future~~ futures Contract and the start of trading hours for the Business Day immediately preceding the final settlement date of an expiring VX ~~future~~ futures Contract shall occur upon commencement of the first period of extended trading hours for the trading session for that Business Day.

~~For the purposes of this Rule, positions shall be aggregated in accordance with Rule 412A(f).~~

One VXM futures contract shall be deemed to be equivalent to one tenth (0.10) of one VX futures contract for purposes of applying the position accountability levels for VX and VXM futures Contracts and VX Options Contracts.

The Exchange will disseminate a delta value for each VX Options Contract for each CFE Business Day. A delta value is a calculation of the expected change in the price of a VX Options Contract given a $1.00 change in the price of the VX futures Contract which underlies that VX Options Contract. For purposes of applying the position accountability levels for VX and VXM futures Contracts and VX Options Contracts, the size of a VX Options Contract shall be deemed to be equivalent to the percentage of one VX futures Contract which underlies that VX Options Contract represented by the delta value of the VX Options Contract (i.e., futures equivalent). A long call/short put VX Options position is treated as equivalent to a long VX futures position for this purpose and a long put/short call VX Options position is treated as equivalent to a short VX futures position for this purpose.

If a position exceeds a position accountability level as a result of a VX Options assignment, the Person that owns or controls that position shall be allowed one Business Day to liquidate the excess position before that position is considered to be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position pursuant Rule 412A. Additionally, if, at the close of trading on a Business Day, a position that includes VX Options exceeds a position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for that Business Day, but does not exceed the position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for the previous Business Day, then the position shall not be considered be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position pursuant to Rule 412A. Notwithstanding the foregoing, the other of the provisions of Rule 412A, including without limitation the provisions of Rule 412A(e), shall remain applicable in both of the situations described in this paragraph.

(e) - (r) No changes.

* * * * *

**1702. Contract Specifications**

(a) - (c) No changes.

(d) *Position Accountability*. VXM futures are subject to position accountability and position aggregation under CFE Rule 412A.

~~The position accountability levels for VXM futures are~~ A Person is subject to the position accountability requirements set forth in Rule 412A if the Person:

(i) ~~ownership or control~~ owns or controls at any time ~~of~~ more than the number of contracts net long or net short in all VX and VXM futures Contracts and all VX Options Contracts combined that in the aggregate would exceed the equivalent of 50,000 VX futures contracts;

(ii) ~~ownership or control of~~ owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures Contracts and all VX Options Contracts on the expiring VX futures Contract combined that in the aggregate would exceed the equivalent of 30,000 VX futures contracts, commencing at the start of trading hours for the Friday prior to the final settlement date of the expiring VX ~~future~~ futures Contract; or

(iii) ~~ownership or control of~~ owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures Contracts and all VX Options Contracts on the expiring VX futures Contract combined that in the aggregate would exceed the equivalent of 10,000 VX futures contracts, commencing at the start of trading hours for the Business Day immediately preceding the final settlement date of the expiring VX ~~future~~ futures Contract. ~~One VXM futures contract shall be deemed to be equivalent to one tenth (0.10) of one VX futures contract for this purpose.~~

For purposes of this Rule, the start of trading hours for the Friday prior to the final settlement date of an expiring VX ~~future~~ futures Contract and the start of trading hours for the Business Day immediately preceding the final settlement date of an expiring VX ~~future~~ futures Contract shall occur upon commencement of the first period of extended trading hours for the trading session for that Business Day.

~~For the purposes of this Rule, positions shall be aggregated in accordance with Rule 412A(f).~~

One VXM futures contract shall be deemed to be equivalent to one tenth (0.10) of one VX futures contract for purposes of applying the position accountability levels for VX and VXM futures Contracts and VX Options Contracts.

The Exchange will disseminate a delta value for each VX Options Contract for each CFE Business Day. A delta value is a calculation of the expected change in the price of a VX Options Contract given a $1.00 change in the price of the VX futures Contract which underlies that VX Options Contract. For purposes of applying the position accountability levels for VX and VXM futures Contracts and VX Options Contracts, the size of a VX Options Contract shall be deemed to be equivalent to the percentage of one VX futures Contract which underlies that VX Options Contract represented by the delta value of the VX Options Contract (i.e., futures equivalent). A long call/short put VX Options position is treated as equivalent to a long VX futures position for this purpose and a long put/short call VX Options position is treated as equivalent to a short VX futures position for this purpose.

If a position exceeds a position accountability level as a result of a VX Options assignment, the Person that owns or controls that position shall be allowed one Business Day to liquidate the excess position before that position is considered to be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position pursuant Rule 412A. Additionally, if, at the close of trading on a Business Day, a position that includes VX Options exceeds a position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for that Business Day, but does not exceed the position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for the previous Business Day, then the position shall not be considered be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position pursuant to Rule 412A. Notwithstanding the foregoing, the other of the provisions of Rule 412A, including without limitation the provisions of Rule 412A(e), shall remain applicable in both of the situations described in this paragraph.

(e) - (r) No changes.

* * * * *

**CHAPTER 26**
**OPTIONS ON CBOE VOLATILITY INDEX FUTURES**
**CONTRACT SPECIFICATIONS**

**2601. Scope of Chapter**

This chapter applies to trading in Options on Cboe Volatility Index Futures ("VX Options"). The procedures for trading, clearing, settlement and any other matters not specifically covered herein shall be governed by the generally applicable rules of the Exchange. The Exchange first listed VX Options for trading on the Exchange on __________.

**2602. Contract Specifications**

(a) *Contract Size*. The exercise of a VX Options Contract results in the delivery of one underlying Cboe Volatility Index ("VX") futures Contract.

(b) *Underlying Futures Contract*. The VX futures Contract that underlies a VX Options Contract is the front month VX futures Contract relative to the expiration date of the VX Options Contract.

The underlying front month VX futures Contract for this purpose is the nearest monthly VX futures Contract that expires on or after the Business Day following the expiration date of the VX Options Contract. A monthly VX futures Contract is a VX futures Contract that generally expires on the third Wednesday of a month and for which the final settlement value is calculated utilizing standard S&P 500 Index ("SPX") options listed on Cboe Options that are A.M. settled.

(c) *Contract Expirations*. The Exchange may list expirations of VX Options calls and puts on the front month VX futures Contract relative to the expiration date of the applicable VX Options Contract. The expirations may expire on any weekday or weekdays and there may be expirations on one, multiple or all weekdays during a week or weeks.

(d) *Exercise (Strike) Prices*. The Exchange may initially list in, at, and/or out-of-the money exercise (strike) prices and may add new exercise (strike) prices for VX Options as it deems appropriate, including in response to market conditions.

The minimum exercise (strike) price interval for VX Options is 0.5 index points.

(e) *Schedule and Prohibited Order Types*. The symbology for a VX Options

Contract denotes the expiration date of the VX Options Contract.

The trading days for VX Options are any Business Day the Exchange is open for trading.

The trading hours for VX Options are regular trading hours from 8:30 a.m. to 3:00 p.m. Chicago time.

Market Orders will not be accepted by the Exchange for VX Options. Any Market Orders for VX Options received by the Exchange will be automatically rejected or canceled back to the sender.

(f) *Minimum Increments*. The minimum increment for single leg prices, the individual legs of spreads, and the net prices of spreads in VX Options is 0.01 index points (equal to a dollar value per minimum increment of $10.00 per contract).

(g) *Position Accountability*. VX Options are subject to position accountability and position aggregation under CFE Rule 412A.

A Person is subject to the position accountability requirements set forth in Rule 412A if the Person:

> (i) owns or controls at any time more than the number of contracts net long or net short in all VX and VXM futures Contracts and all VX Options Contracts combined that in the aggregate would exceed the equivalent of 50,000 VX futures contracts;
>
> (ii) owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures Contracts and all VX Options Contracts on the expiring VX futures Contract combined that in the aggregate would exceed the equivalent of 30,000 VX futures contracts, commencing at the start of trading hours for the Friday prior to the final settlement date of the expiring VX futures Contract; or
>
> (iii) owns or controls more than the number of contracts net long or net short in the expiring VX and VXM futures Contracts and all VX Options Contracts on the expiring VX futures Contract combined that in the aggregate would exceed the equivalent of 10,000 VX futures contracts, commencing at the start of trading hours for the Business Day immediately preceding the final settlement date of the expiring VX futures Contract.

For purposes of this Rule, the start of trading hours for the Friday prior to the final settlement date of an expiring VX futures Contract and the start of trading hours for the Business Day immediately preceding the final settlement date of an expiring VX futures Contract shall occur upon commencement of the first period of extended trading hours for the trading session for that Business Day.

One VXM futures contract shall be deemed to be equivalent to one tenth (0.10) of one VX futures contract for purposes of applying the position accountability levels for VX and VXM futures Contracts and VX Options Contracts.

The Exchange will disseminate a delta value for each VX Options Contract for each CFE

Business Day. A delta value is a calculation of the expected change in the price of a VX Options Contract given a $1.00 change in the price of the VX futures Contract which underlies that VX Options Contract. For purposes of applying the position accountability levels for VX and VXM futures Contracts and VX Options Contracts, the size of a VX Options Contract shall be deemed to be equivalent to the percentage of one VX futures Contract which underlies that VX Options Contract represented by the delta value of the VX Options Contract (i.e., futures equivalent). A long call/short put VX Options position is treated as equivalent to a long VX futures position for this purpose and a long put/short call VX Options position is treated as equivalent to a short VX futures position for this purpose.

If a position exceeds a position accountability level as a result of a VX Options assignment, the Person that owns or controls that position shall be allowed one Business Day to liquidate the excess position before that position is considered to be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position pursuant Rule 412A. Additionally, if, at the close of trading on a Business Day, a position that includes VX Options exceeds a position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for that Business Day, but does not exceed the position accountability level when evaluated using the VX Options delta values disseminated by the Exchange for the previous Business Day, then the position shall not be considered be above the position accountability level for purposes of the obligation to provide notice to the Exchange with regard to the position pursuant to Rule 412A. Notwithstanding the foregoing, the other of the provisions of Rule 412A, including without limitation the provisions of Rule 412A(e), shall remain applicable in both of the situations described in this paragraph.

(h) *Termination of Trading*. Trading hours in an expiring VX Options Contract end at 3:00 p.m. Chicago time on its expiration date.

(i) *Contract Modifications*. Specifications are fixed as of the first day of trading of a Contract. If any U.S. government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules, and all open and new Contracts shall be subject to such government orders.

(j) *Execution Priorities*. Pursuant to Rule 406(a)(i), the base allocation method of price-time priority shall apply to trading in VX Options.

(k) *Crossing Two Original Orders*. The eligible size for an original Order that may be entered for a cross trade with one or more other original Orders pursuant to Rule 407 is one contract. The Trading Privilege Holder or Authorized Trader, as applicable, must expose to the market for at least five seconds under Rule 407(a) at least one of the original Orders that it intends to cross.

(l) *Price Limits and Halts*.

(i) *Price Limits.* Pursuant to Rule 413, VX Options are not subject to price limits.

(ii) *Circuit Breaker Halts*. Trading in VX Options shall be halted pursuant to Rule 417A if there is a Level 1, 2 or 3 Market Decline, except that the halt period provided for under Rule 417A(c)(i) following a Level 1 or Level 2 Market Decline shall be 10 minutes instead of 15 minutes and the Exchange may resume trading in VX Options any time after the 10-minute halt period.

(iii) *Halts in Underlying Futures Contract*. CFE shall halt trading in a VX Options Contract during any trading halt in the VX futures Contract which underlies that VX Options Contract.

(m) *Exchange of Contract for Related Position*. Exchange of Contract for Related Position transactions, as set forth in Rule 414, may be entered into with respect to VX Options. Any Exchange of Contract for Related Position transaction must satisfy the requirements of Rule 414.

The minimum price increment for an Exchange of Contract for Related Position involving VX Options is 0.005 index points.

(n) *Block Trades*. Pursuant to Rule 415(a)(i), the minimum Block Trade quantity for VX Options is 200 contracts if there is only one leg involved in the trade. If the Block Trade is executed as a spread transaction with multiple legs, each leg is required to have a minimum size of 100 contracts.

The minimum price increment for a Block Trade in VX Options is 0.005 index points.

(o) *No-Bust Range*. Pursuant to Rule 416, the CFE error trade policy may only be invoked for a trade price that is higher or lower than the true market price of the applicable VX Options Contract by an amount that is larger than the greater of the following three amounts:

(i) the delta value of the VX Options Contract at the relevant time as determined by the Exchange multiplied by the no-bust range for the VX futures Contract which underlies the VX Options Contract;

(ii) 20% of the true market price of the VX Options Contract up to 25% of the no-bust range for the VX futures Contract which underlies the VX Options Contract; and

(iii) 10 minimum price increments for the VX Options Contract.

In accordance with Policy and Procedure III, the Trade Desk will determine what the true market price for the VX Options Contract was immediately before the potential error trade occurred. In making that determination, the Trade Desk may consider all relevant factors, including the last trade price for such Contract, a better bid or offer price, a more recent price in a different series, the prices of related contracts trading in other markets and the theoretical value of the VX Options Contract as determined by the Exchange.

(p) *Pre-execution Discussions*. The Order Exposure Period under Policy and Procedure IV before an Order may be entered to take the other side of another Order with respect to which there has been pre-execution discussions is five seconds after the first Order was entered into the CFE System.

(q) *Reportable Position and Trading Volume.*

(i) *Reportable Position.* Pursuant to Commission Regulation §15.03 and Commission Regulation Part 17, the position level that is required to be reported to the Commission is any open position in VX Options Contracts at the close of trading on any trading day equal to or in excess of 200 contracts on either side of the market.

(ii) *Reportable Trading Volume*. Pursuant to Commission Regulation §15.04 and Commission Regulation Part 17, the reportable trading volume that triggers the requirement to report a volume threshold account to the Commission is 50 or more VX Options contracts during a single trading day or such other reportable trading volume threshold as may be designated by the Commission.

(r) *Daily Settlement Price*. The daily settlement price for a VX Options Contract will be determined in the following manner for each Business Day other than the expiration date of the VX Options Contract:

(i) The daily settlement price for the VX Options Contract will be determined by the Exchange by utilizing a Cox-Ross-Rubinstein binomial tree model to derive the theoretical option price for that Contract utilizing its theoretical volatility.

(ii) The daily settlement price may go out to four decimal places and may be a price that is not at a minimum increment for the VX Options Contract.

(iii) The Exchange may in its sole discretion establish a daily settlement price for a VX Options Contract that it deems to be a fair and reasonable reflection of the market if:

(A) a calculation of the theoretical option price for the VX Options Contract calculated as described in paragraph (r)(i) above is not available for use in determining the daily settlement price of the VX Options Contract due to a system issue or other reason;

(B) the Exchange determines in its sole discretion that the theoretical option price for the VX Options Contract calculated as described in paragraph (r)(i) above is not a fair and reasonable reflection of the market; or

(C) there is a trading halt in the VX Options Contract or other unusual circumstance at or around the scheduled close of trading hours for the VX Options Contract on the applicable Business Day.

(s) *Trade at Settlement Transactions*. Trade at Settlement ("TAS") transactions pursuant to Rule 404A are not permitted in VX Options. VX Options will also not be listed on TAS contracts in VX Futures.

(t) *Price Reasonability Checks*. The Limit Order price reasonability percentage parameters designated by the Exchange for VX Options pursuant to Rule 513A(d) are set forth in the table below.

| Limit Price of Limit Order | Price Reasonability Percentage |
|---|---|
| ≤ $0.50 | 400% |
| $0.51 - $1.99 | 35% |
| $2.00 - $5.00 | 20% |
| $5.01 - $10.00 | 15% |
| $10.01 - $20.00 | 10% |
| $20.01 - $50.00 | 6% |
| $50.01 - $100.00 | 4% |
| ≥ 100.01 | 4% |

(u) *Exercise Style*. VX Options have European-style exercise. A VX Options Contract may be exercised only on its expiration date in accordance with the Rules and By-Laws of OCC. Subject to the Rules and By-Laws of OCC, a VX Options contract that is in-the-money by $0.01 or more upon its expiration is automatically exercised on its expiration date and contrary exercise instructions are not permitted.

(v) *Exercise and Delivery*. The exercise of VX Options and the delivery following exercise of underlying VX futures are governed by the Rules and By-Laws of OCC. The exercise of a VX Options Contract results in the delivery on the following OCC business day of one underlying VX futures Contract.

**2603. Settlement**

The exercise settlement value of an expiring VX Options Contract is the daily settlement price of the VX futures Contract that underlies the VX Options contract on the expiration date of the VX Options Contract. The exercise settlement value is rounded to the nearest 0.01.

Subject to the Rules and By-Laws of OCC, VX Options Contracts that are in-the-money by $0.01 or more upon their expiration are automatically exercised and contrary exercise instructions are not permitted.

Clearing Members holding open positions in a VX Options Contract at the expiration of the VX Options Contract that are in-the-money shall deliver or receive the underlying VX futures Contract in accordance with the Rules and By-Laws of OCC.

If the exercise settlement value is not available or the normal settlement procedure cannot be utilized due to a trading disruption or other unusual circumstance, the exercise settlement value will be determined in accordance with the Rules and Bylaws of OCC.

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