SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-95319; File No. SR-OCC-2022-001)

July 19, 2022

Self-Regulatory Organizations; The Options Clearing Corporation; Order Granting Approval of Proposed Rule Change Concerning The Options Clearing Corporation's Margin Methodology for Incorporating Variations in Implied Volatility

## I. INTRODUCTION

On January 24, 2022, the Options Clearing Corporation ("OCC") filed with the Securities and Exchange Commission ("Commission") the proposed rule change SR-OCC-2022-001 ("Proposed Rule Change") pursuant to Section 19(b) of the Securities Exchange Act of 1934 ("Exchange Act")[1] and Rule 19b-4[2] thereunder to change quantitative models related to certain volatility products.[3] The Proposed Rule Change was published for public comment in the Federal Register on February 11, 2022.[4] The Commission has received comments regarding the Proposed Rule Change.[5]

---

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

2 17 CFR 240.19b-4.

3 See Notice of Filing infra note 4, at 87 Fed. Reg. 8072.

4 Securities Exchange Act Release No. 94165 (Feb. 7, 2022), 87 Fed. Reg. 8072 (Feb. 11, 2022) (File No. SR-OCC-2022-001) ("Notice of Filing"). OCC also filed a related advance notice (SR-OCC-2022-801) ("Advance Notice") with the Commission pursuant to Section 806(e)(1) of Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act, entitled the Payment, Clearing, and Settlement Supervision Act of 2010 and Rule 19b-4(n)(1)(i) under the Exchange Act. 12 U.S.C. 5465(e)(1). 15 U.S.C. 78s(b)(1) and 17 CFR 240.19b-4, respectively. The Advance Notice was published in the Federal Register on February 11, 2022. Securities Exchange Act Release No. 94166 (Feb. 7, 2022), 87 Fed. Reg. 8063 (Feb. 11, 2022) (File No. SR-OCC-2022-801).

5 Comments on the Proposed Rule Change are available at https://www.sec.gov/comments/sr-occ-2022-001/srocc2022001.htm. Since the proposal contained in the Proposed Rule Change was also filed as an advance notice, all public

On March 24, 2022, pursuant to Section 19(b)(2) of the Exchange Act,[6] the Commission designated a longer period within which to approve, disapprove, or institute proceedings to determine whether to approve or disapprove the Proposed Rule Change.[7] On May 12, 2022, the Commission instituted proceedings to determine whether to approve or disapprove the Proposed Rule Change.[8] This order approves the Proposed Rule Change.

OCC is a central counterparty ("CCP"), which means it interposes itself as the buyer to every seller and seller to every buyer for financial transactions. As the CCP for the listed options markets in the U.S., as well as for certain futures, OCC is exposed to the risk that one or more of its members may fail to make a payment or to deliver securities. OCC addresses such exposures, in part, by requiring its members to provide collateral, including margin collateral. Margin is the collateral that CCPs, like OCC, collect to cover potential changes in a member's positions over a set period of time. Typically, margin is designed to cover such exposures during normal market conditions, which means that margin collateral should be sufficient to exposures at least 99 out of 100 days.

Margin requirements may fluctuate from day to day; however, CCPs seek to reduce fluctuations that could otherwise impose systemic risk. For example, if a CCP collects too little margin during relatively stable market conditions, then it would need to collect significantly

---

comments received on the proposal are considered regardless of whether the comments are submitted on the Proposed Rule Change or the Advance Notice.

6 15 U.S.C. 78s(b)(2).

7 Securities Exchange Act Release No. 94165 (Feb. 7, 2022), 87 Fed. Reg. 8072 (Feb. 11, 2022) (File No. SR-OCC-2022-001).

8 Securities Exchange Act Release No. 94900 (May 12, 2022), 87 Fed. Reg. 30284 (May 18, 2022) (File No. SR-OCC-2022-001).

more margin during stressed market conditions. Margin requirements that are strongly reactive to market movements are considered to be "procyclical." By contrast, a CCP may collect slightly more margin during quiet times to reduce the additional strain it places on members during times of market stress.

OCC's process for setting margin requirements considers several distinct risk factors, including volatility. OCC's current models for estimating the impact of volatility on member positions have a number of limitations that may result in procyclical margin requirements. OCC is proposing to change its models to reduce the level of procyclicality in its margin requirements caused by changes in volatility. The changes OCC is proposing would also provide for offsets between products based on the same underlying asset. Based on data provided by OCC, the proposed model changes would likely increase margin requirements slightly overall, which, in turn, would reduce the additional amount of margin OCC would need to collect during periods of market stress.

The proposed changes to OCC's models are a continuation of volatility model changes that OCC has implemented over the past several years. In 2015, the Commission approved OCC's proposal to more broadly incorporate variations in implied volatility in OCC's margin methodology.[9] In 2018, OCC modified its implied volatility model to address issues highlighted by large spikes in volatility. The following sections describe the proposed changes to OCC's models in more detail as well as the consistency of the proposed changes with applicable law.

---

[9] See Securities Exchange Act Release No. 76781 (Dec. 28, 2015), 81 Fed. Reg. 135 (Jan. 4, 2016) (File No. SR-OCC-2015-016).

## II. BACKGROUND[10]

The System for Theoretical Analysis and Numerical Simulations ("STANS") is OCC's methodology for calculating margin.[11] STANS includes econometric models that incorporate a number of risk factors. OCC defines a risk factor in STANS as a product or attribute whose historical data is used to estimate and simulate the risk for an associated product. The majority of risk factors utilized in STANS are the returns on individual equity securities; however, a number of other risk factors may be considered, including, among other things, returns on implied volatility.[12]

OCC's STANS Methodology Description includes subsections on (i) implied volatility risk factors to measure the expected future volatility of an option's underlying security at

---

10 Capitalized terms used but not defined herein have the meanings specified in OCC's Rules and By-Laws, available at https://www.theocc.com/about/publications/bylaws.jsp.

11 In February 2021, the Commission approved a proposed rule change by OCC to adopt a new document describing OCC's system for calculating daily and intraday margin requirements for its Clearing Members (the "STANS Methodology Description"). See Securities Exchange Release No. 91079 (Feb. 8, 2021), 86 Fed. Reg. 9410 (Feb. 12, 2021) (File No. SR-OCC-2020-016) ("STANS Methodology Approval").

12 Using the Black-Scholes options pricing model, the implied volatility is the standard deviation of the underlying asset price necessary to arrive at the market price of an option of a given strike, time to maturity, underlying asset price and the current risk-free rate. In December 2015, the Commission approved a proposed rule change and issued a Notice of No Objection to an advance notice filing by OCC to modify its margin methodology by more broadly incorporating variations in implied volatility within STANS. See Securities Exchange Act Release No. 76781 (Dec. 28, 2015), 81 Fed. Reg. 135 (Jan. 4, 2016) (File No. SR-OCC-2015-016) and Securities Exchange Act Release No. 76548 (Dec. 3, 2015), 80 Fed. Reg. 76602 (Dec. 9, 2015) (File No. SR-OCC-2015-804). In December 2018, the Commission approved a proposed rule change and issued a Notice of No Objection to an advance notice filing by OCC to introduce an exponentially weighted moving average for the daily forecasted volatility of implied volatility risk factors in STANS. See Securities Exchange Act Release No. 84879 (Dec. 20, 2018), 83 Fed. Reg. 67392 (Dec. 28, 2018) (File No. SR-OCC-2018-014) and Securities Exchange Act Release No. 84838 (Dec. 18, 2018), 83 Fed. Reg. 66791 (Dec. 27, 2018) (File No. SR-OCC-2018-804).

expiration, (ii) a synthetic futures model to price specified products such as volatility index-based futures, and (iii) a specialized factor model to price variance futures.[13] As described below, and in more detail in the Notice of Filing, OCC proposes to change three quantitative models related to certain volatility products. Specifically, OCC proposes the following changes:

(1) implement a new model for incorporating variations in implied volatility within STANS for products based on the S&P 500 Index ( "S&P 500"); such proposed model being the "S&P 500 Implied Volatility Simulation Model");

(2) implement a new model to margin futures on volatility indexes[14] ("Volatility Index Futures"); such proposed model being the "Volatility Index Futures Model"); and

(3) replace OCC's model for margining variance futures;[15] such model being the "Variance Futures Model."

A. S&P 500 Implied Volatility Simulation Model

OCC considers variations in implied volatility within STANS to ensure that the anticipated cost of liquidating options positions in an account recognizes the possibility that implied volatility could change during the two-business day liquidation time horizon and lead to corresponding changes in the market prices of the options. OCC relies on its Implied Volatilities Scenarios Model to simulate the variations in implied volatility that OCC uses to re-price options within STANS for substantially all option contracts[16] available to be cleared by OCC that have a

---

13 See STANS Methodology Approval, 86 Fed. Reg. at 9411.

14 A volatility index is an index designed to measure the volatiles implied by the prices of options on an underlying index.

15 A variance future is an exchange-traded futures contract based on the expected realized variance of an underlying interest.

16 OCC's Implied Volatilities Scenarios Model excludes: (i) binary options, (ii) options on commodity futures, (iii) options on U.S. Treasury securities, and (iv) Asians and Cliquets.

residual tenor[17] of less than three years. As noted above, OCC now proposes to implement a new model, the S&P 500 Implied Volatility Simulation Model, for incorporating variations in implied volatility within STANS for products based on the S&P 500 Index.

In the Notice of Filing, OCC stated that its current Implied Volatilities Scenarios Model is subject to certain limitations and issues.[18] Such issues relate to (1) volatility of volatility forecasting; (2) volatility surface discontinuities; and (3) arbitrage constraints and cross-product offsets. OCC proposes to replace the current Implied Volatilities Scenarios Model for the S&P 500 product group with the proposed S&P 500 Implied Volatility Simulation Model to address such limitations, which are described below. OCC would continue to use the current Implied Volatilities Scenarios Model for the products other than S&P 500-based products.[19]

*Volatility of volatility forecasting*. In the current Implied Volatilities Scenarios Model, OCC uses a GARCH model[20] to forecast the volatility of implied volatility risk factors.[21] OCC's past analysis has demonstrated that the volatility changes forecasted by the GARCH model were extremely sensitive to sudden spikes in volatility, which at times resulted in margin requirements that OCC believes were unreasonable.[22] OCC's current Implied Volatilities Scenarios Model

---

17 The "tenor" of an option is the amount of time remaining to its expiration.

18 See Notice of Filing, 87 Fed. Reg. at 8074.

19 See Notice of Filing, 87 Fed. Reg. at 8075, n. 31.

20 The acronym "GARCH" refers to an econometric model that can be used to estimate volatility based on historical data. See generally Tim Bollerslev, "Generalized Autoregressive Conditional Heteroskedasticity," Journal of Econometrics, 31(3), 307-327 (1986).

21 See Notice of Filing, 87 Fed. Reg. at 8073.

22 See id.

relies on an exponentially weighted moving average[23] of forecasted volatilities over a specified look-back period to reduce the model's sensitivity to large, sudden shocks in market volatility. OCC stated that reliance on an exponentially weighted moving average reduces and delays the impact of large implied volatility spikes, but that it does so in an artificial way that does not target the limitations and issues with the model noted above.[24]

In the proposed S&P 500 Implied Volatility Simulation Model, OCC would forecast volatility for S&P 500 1-month at-the-money ("ATM") implied volatility based on the 30-day VVIX, Cboe's option-implied volatility-of-volatility index. OCC would further smooth the daily 30-day VVIX to control for procyclicality. OCC asserted that, based on a performance analysis, the proposed S&P 500 Implied Volatility Simulation Model would (1) provide adequate margin coverages for both upward and downward movements of implied volatility over the margin risk horizon; and (2) remain stable across both time and low, medium, and high volatility market conditions.[25]

---

23 An exponentially weighted moving average is a statistical method that averages data in a way that gives more weight to the most recent observations using an exponential scheme. As noted above, OCC introduced an exponentially weighted moving average for the daily forecasted volatility of implied volatility risk factors in STANS in 2018. See supra note 12. OCC found that using unweighted daily forecasted volatilities of implied volatilities caused jumps in aggregate margin requirements of up to 80 percent overnight, which OCC believes were unreasonable. See Securities Exchange Act Release No. 84879 (Dec. 20, 2018), 83 Fed. Reg. 67392, 67393 (Dec. 28, 2018) (File No. SR-OCC-2018-014) and Securities Exchange Act Release No. 84838 (Dec. 18, 2018), 83 Fed. Reg. 66791, 66792 (Dec. 27, 2018) (File No. SR-OCC-2018-804).

24 See Notice of Filing, 87 Fed. Reg. at 8074.

25 See Notice of Filing, 87 Fed. Reg. at 8076.

*Volatility surface discontinuities*. The current Implied Volatilities Scenarios Model relies on a "nearest neighbor" method to map the implied volatility surface between reference points.[26] The reliance on a nearest neighbor method introduces discontinuity in the implied volatility curve for a given tenor. Further, the current Implied Volatilities Scenarios Model's use of arithmetic implied volatility returns can result in near-zero implied volatility in simulated scenarios, which OCC states is unrealistic.[27] Additionally, the current model includes implied volatility scenarios for call and put options with the same tenor and strike price that are not equal, which contributes to inconsistencies in the implied volatility scenarios. OCC now proposes to model the implied volatility surface directly to generate a surface that would be smooth and continuous in both term structure and moneyness[28] dimensions.[29] Modeling the implied volatility surface directly rather than mapping the surface based on a series of reference points would simplify OCC's margin methodology and help avoid the discontinuities discussed above.

*Arbitrage constraints and cross-product offsets*. The current Implied Volatilities Scenarios Model does not impose constraints to ensure that simulated surfaces are arbitrage-free. Because of this potential for arbitrage, OCC believes the implied volatilities are not adequate inputs to price Variance Futures and Volatility Index Futures accurately, both of which assume an

---

26 The Implied Volatilities Scenarios Model models a volatility surface by incorporating nine risk factors based on a range of tenors and option deltas. The "delta" of an option represents the sensitivity of the option price to the price of the underlying security.

27 See Notice of Filing, 87 Fed. Reg. at 8074.

28 The term "moneyness" refers to the relationship between the current market price of the underlying interest and the exercise price. See Notice of Filing, 87 Fed. Reg. at 8073, n. 12.

29 Key risk factors driving the implied volatility surface are explicitly modeled within the model itself. See Notice of Filing, 87 Fed. Reg. at 8076.

arbitrage-free condition.[30] Further, the current Implied Volatilities Scenarios Model may not provide natural offsetting of risks in Clearing Member accounts that contain combinations of S&P 500 options, variance futures, and/or volatility index futures because OCC models such options and futures independent of each other rather than as inherently related components of a broader system, which could in turn result in unnecessarily large margin requirements for certain Clearing Members.

Under the proposed model, put and call options with the same tenors and strike prices would have the same implied volatility scenarios. Imposing such a constraint on arbitrage would be sufficient to allow OCC to use the output of the proposed model for margining volatility index futures and variance futures.[31] Use of the proposed S&P 500 Implied Volatility Simulation Model as an input to margining volatility index futures and variance futures also would, in turn, support margin offsets between S&P 500 options, VIX futures, and S&P 500 variance futures.

B. Volatility Index Futures Model

To calculate margin for Clearing Member portfolios, OCC currently relies on its "Synthetic Futures Model" to calculate the theoretical value of volatility index futures, among other products.[32] As noted above, OCC now proposes to implement its new Volatility Index

---

30 See Notice of Filing, 87 Fed. Reg. at 8074.

31 See Notice of Filing, 87 Fed. Reg. at 8076. OCC intends to rely on the output from the proposed S&P 500 Implied Volatility Simulation Model as an input to the proposed Volatility Index Futures Model and Variance Futures Model described below. See Notice of Filing, 87 Fed. Reg. at 8075.

32 See Securities Exchange Act Release No. 85873 (May 16, 2019), 84 Fed. Reg. 23620 (May 22, 2019) (File No. SR-OCC-2019-002) (approving a proposed rule change regarding the measurement of volatilities implied by prices of options on a particular underlying interest). OCC also applies the Synthetic Futures Model to (i) futures on the American Interbank Offered Rate ("AMERIBOR"); (ii) futures products linked to indexes comprised of continuous yield based on the most recently issued (i.e., "on-the-

Futures model, which would be used to calculate the theoretical values of futures on certain volatility futures indexes (i.e., indexes designed to measure volatilities implied by prices of options on a particular underlying index).[33]

In the Notice of Filing, OCC stated that its current Synthetic Futures Model is subject to certain limitations and issues.[34] First, the current Synthetic Futures Model relies on a GARCH variance forecast that, as noted above, is sensitive to large volatility shocks. OCC mitigates this sensitivity by imposing a floor for variance estimates based on the underlying index (e.g., VIX). The proposed Volatility Index Futures Model would instead rely on a direct link between the volatility index futures price and the underlying S&P 500 options price to mitigate the model's sensitivity to large volatility shocks. Such a link would come from reliance on the output of the proposed S&P 500 Implied Volatility Simulation Model, which does not rely on a GARCH process and, therefore, the input to the proposed Volatility Index Futures Model would not have the same sensitivity to large volatility shocks as the current Synthetic Futures Model.

---

run") U.S. Treasury notes listed by Small Exchange Inc. ("Small Treasury Yield Index Futures"); and (iii) futures products linked to Light Sweet Crude Oil (WTI) listed by Small Exchange ("Small Crude Oil Futures"). See Securities Exchange Act Release No. 89392 (Jul. 24, 2020), 85 Fed. Reg. 45938 (Jul. 30, 2020) (File No. SR-OCC-2020-007) (application of OCC's Synthetic Futures model to AMERIBOR futures); Securities Exchange Act Release No. 90139 (Oct. 8, 2020), 85 Fed. Reg. 65886 (Oct. 16, 2020) (File No. SR-OCC-2020-012) (application of OCC's Synthetic Futures model to Small Treasury Yield Index Futures); Securities Exchange Act Release No. 91833 (May 10, 2021), 86 Fed. Reg. 26586 (May 14, 2021) (File No. SR-OCC-2021-005) (application of OCC's Synthetic Futures model to Small Crude Oil Futures).

33 OCC would continue to use the current Synthetic Futures Model to model prices for interest rate futures on AMERIBOR, Small Treasury Yield Index Futures and Small Crude Oil Futures. See Notice of Filing, 87 Fed. Reg. at 8074, n. 25.

34 See Notice of Filing, 87 Fed. Reg. at 8074.

Second, the current Synthetic Futures Model makes the rolling volatility futures contracts take on different variances from calibration at futures roll dates, which could translate to jumps in margin. The proposed Volatility Index Futures Model would be based on an entirely different approach that would not incorporate the same potential jumps in margin. Specifically, OCC proposes to adopt a parameter-free approach based on the replication of log-contract, which measures the expected realized volatility using S&P 500 options, as discussed in Cboe's VIX white paper.[35]

As described in the confidential exhibits OCC submitted with the Proposed Rule Change, the proposed Volatility Index Futures Model would provide more consistent margin coverage across the term structure when compared to the current Synthetic Futures Model. Based on OCC's testing, the proposed model would continue to provide adequate margin coverage during periods of low and high volatility as well as for short-term futures. Further, the proposed model would provide for more efficient margin coverage for VIX futures portfolios hedged with S&P 500 options.

C. Variance Futures Model

Variance futures are commodity futures for which the underlying interest is a variance. OCC's current model for calculating the theoretical value of variance futures, adopted in 2007, is an econometric model designed to capture long- and short-term conditional variance of the underlying S&P 500 to generate variance futures prices. OCC now proposes to replace its current model for margining variance futures with the proposed Variance Futures Model, which

35 See Cboe, VIX White Paper (2019), available at https://www.cboe.com/micro/vix/vixwhite.pdf.

would be based on a replication technique using the log-contract to price variance futures similar to the proposed Volatility Index Futures Model.[36]

OCC believes that its current model for margining variance futures has several disadvantages.[37] First, OCC currently models variance futures by simulating a final settlement price rather than a near-term variance futures price, which is not consistent with OCC's two-day liquidation horizon.[38] The proposed Variance Futures Model would simulate a near-term variance futures price rather than a final settlement price, consistent with OCC's two-day liquidation assumption.

Second, similar to the Implied Volatilities Scenarios Model and Synthetic Futures Model, OCC's current model for margining variance futures relies on a GARCH model that OCC believes: (1) does not provide appropriate risk offsets with other instruments inherently related to the S&P 500 implied volatility and (2) does not generate margin requirements that are sufficiently conservative for short positions and aggressive for long positions to avoid causing model backtesting failures.[39]

Instead of relying on a GARCH variance forecast, the proposed Variance Futures Model would approximate the implied component of variance futures (i.e., the unrealized variance) based on option prices generated using the proposed S&P 500 Implied Volatility Simulation

---

36 This approach is based on Cboe's published method for pricing S&P 500 variance futures. See Cboe, S&P 500 Variance Futures Contract Specification (Dec. 10, 2012), available at http://www.cboe.com/products/futures/va-s-p-500-variance-futures/contract-specifications.

37 See Notice of Filing, 87 Fed. Reg. at 8075.

38 OCC's processes for managing the default of a Clearing Member assume that OCC can close out the defaulter's portfolio within two days of default.

39 See Notice of Filing, 87 Fed. Reg. at 8075.

Model. As described in the confidential exhibits OCC submitted with the Proposed Rule Change, this would significantly reduce long-side coverage exceedances relative to the current model while maintaining coverage for periods of low and high volatility. It would also offer offsets for variance futures with the options of the same underlying security.

## III. DISCUSSION AND COMMISSION FINDINGS

Section 19(b)(2)(C) of the Exchange Act directs the Commission to approve a proposed rule change of a self-regulatory organization if it finds that such proposed rule change is consistent with the requirements of the Exchange Act and the rules and regulations thereunder applicable to such organization.[40] After carefully considering the Proposed Rule Change, the Commission finds that the proposal is consistent with the requirements of the Exchange Act and the rules and regulations thereunder applicable to OCC. More specifically, the Commission finds that the proposal is consistent with Section 17A(b)(3)(A) of the Exchange Act,[41] and Rule 17Ad-22(e)(6)[42] thereunder, as described in detail below.

### A. Consistency with Section 17A(b)(3)(F) of the Exchange Act

Section 17A(b)(3)(F) of the Exchange Act requires, among other things, that the rules of a clearing agency be designed to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible.[43] Based on its review of the record, and for the reasons described below, the Commission believes that allowing OCC to

---

40 15 U.S.C. 78s(b)(2)(C).

41 15 U.S.C. 78q-1(b)(3)(A).

42 17 CFR 240.17Ad-22(e)(6).

43 15 U.S.C. 78q-1(b)(3)(F).

make the proposed model changes described above is consistent with the safeguarding of securities and funds which are in its custody or control or for which it is responsible.

The proposed models provide for margin coverage levels that are consistent with, and in certain instances (e.g., long-side variance futures coverage) better than, the current models. The proposed models would also simplify OCC's methodology for simulating variations in implied volatilities while simultaneously supporting offsets for products with the same underlying (e.g., volatility and variance products based on the S&P 500). The Commission believes that providing for such offsets would more accurately represent the relationship between the products OCC clears. Ensuring that OCC's margin models accurately reflect the relationships between the products OCC clears would, in turn, facilitate OCC's ability to set margins that more accurately reflect the risks posed by such products. Setting margins that accurately reflect the risks posed by the products OCC clears could reduce the likelihood that OCC would not have sufficient margin to address losses arising out of the default of a Clearing Member. Reducing the likelihood that OCC holds insufficient margin to address default losses would, in turn, further assure the safeguarding of surviving Clearing Members' collateral by reducing the likelihood that OCC would be forced to charge losses to the Clearing Fund.

The Commission believes, therefore, that the proposed model changes are consistent with the requirements of Section 17A(b)(3)(F) of the Exchange Act.[44]

B. Consistency with Rule 17Ad-22(e)(6) under the Exchange Act

Rule 17Ad-22(e)(6) under the Exchange Act requires that a covered clearing agency establish, implement, maintain, and enforce written policies and procedures reasonably designed to cover, if the covered clearing agency provides central counterparty services, its credit

[44] 15 U.S.C. 78q-1(b)(3)(F).

exposures to its participants by establishing a risk-based margin system that, among other things, (1) considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market[45] and (2) calculates sufficient margin to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default.[46]

As described above, the proposed models would remove the reliance on GARCH models that have demonstrated extreme sensitivity to sudden spikes in volatility. The Commission believes that such reactivity can produce instability and in certain instances over or underestimation of margin requirements.[47] The proposed models would also replace the modeling techniques that currently allow for discontinuities and jumps in margin (e.g., simulating scenarios with near-zero implied volatility). Such discontinuities and jumps in margin may, in turn, lead to disparate margin requirements for instruments with similar risk profiles. Further, OCC's proposed reliance on output from the proposed S&P 500 Implied Volatility Simulation Model as an input to the Volatility Index Futures model and Variance Futures model would capture the natural risk offsets between inherently related products. Providing for such offsets would more accurately represent the relationship between the products OCC clears. Ensuring that OCC's margin models accurately reflect the relationships between the products OCC clears would, in turn, facilitate OCC's ability to set margins that more

---

45 17 CFR 240.17Ad-22(e)(6)(i).

46 17 CFR 240.17Ad-22(e)(6)(iii)

47 For example, OCC's current model would have increased aggregate margin requirements by 80 percent overnight in response to the increased volatility observed on February 5, 2018. See Securities Exchange Act Release No. 84879 (Dec. 20, 2018), 83 Fed. Reg. 67392, 67393 (Dec. 28, 2018).

accurately reflect the risks posed by such products. Further, providing for such offsets could reduce the likelihood that Clearing Members would be required to provide additional financial resources unnecessarily, which, in turn, could reduce the strain on such members during stress market conditions. Additionally, the proposed Variance Futures model would simulate a near-term variance futures price rather than a final settlement price, which is consistent with the risks OCC would face in the event of a Clearing Member default.

In response to the Notice of Filing,[48] the Commission received a comment opposing the proposal on the basis that the change would reduce margins to a level that could ensure some Clearing Members would fail, with expenses borne by "direct investors."[49] The commenter's assertions, however, are inconsistent with the confidential performance data provided by OCC.

---

48 See Notice of Filing, at 87 Fed. Reg. 8072.

49 Comment from Mary (Feb. 7, 2022), available at https://www.sec.gov/comments/sr-occ-2022-001/srocc2022001-20114809-267072.htm. The commenter also raised a concern regarding the confidentiality of certain exhibits. Id. OCC asserted that the exhibits to the filing were entitled to confidential treatment because they contained commercial and financial information that is not customarily released to the public and is treated as the private information of OCC. Under Section 23(a)(3) of the Exchange Act, the Commission is not required to make public statements filed with the Commission in connection with a proposed rule change of a self-regulatory organization if the Commission could withhold the statements from the public in accordance with the Freedom of Information Act ("FOIA"), 5 U.S.C. 552. 15 U.S.C. 78w(a)(3). The Commission has reviewed the documents for which OCC requests confidential treatment and concludes that they could be withheld from the public under the FOIA. FOIA Exemption 4 protects confidential commercial or financial information. 5 U.S.C. 552(b)(4). Under Exemption 4, information is confidential if it "is both customarily and actually treated as private by its owner and provided to government under an assurance of privacy." Food Marketing Institute v. Argus Leader Media, 139 S. Ct. 2356, 2366 (2019). In its requests for confidential treatment, OCC stated that it has not disclosed the confidential exhibits to the public, and the information is the type that would not customarily be disclosed to the public. In addition, by requesting confidential treatment, OCC had an assurance of privacy because the Commission generally protects information that can be withheld under Exemption 4. Thus, the Commission has determined to accord confidential treatment to the confidential exhibits.

The confidential information provided by OCC includes backtesting data demonstrating how the proposed models would have performed had they been in production at OCC from February 2018 through February 2021. This backtesting period includes the period of increased volatility observed on February 5, 2018 that demonstrated the reactivity of OCC's current models.[50] The confidential information provided by OCC and reviewed by the Commission demonstrates that, overall, the proposed models perform better than OCC's current models with regard to setting margin requirements to cover exposures presented by Clearing Member portfolios.[51]

Accordingly, the Commission believes that the proposed model changes are consistent with Rule 17Ad-22(e)(6) under the Exchange Act.[52]

---

50 See supra footnote 47.

51 The Commission received other comments generally asserting that the proposal would reduce margin at the expense of retail investors and that there is a need to "lower the amount of leverage in the system." As described above, the backtesting data provided by OCC demonstrates that the proposed models would set margin requirements that more effectively cover exposures presented by Clearing Member portfolios, which include customer positions.

52 17 CFR 240.17Ad-22(e)(6).

## IV. CONCLUSION

On the basis of the foregoing, the Commission finds that the Proposed Rule Change is consistent with the requirements of the Exchange Act, and in particular, the requirements of Section 17A of the Exchange Act[53] and the rules and regulations thereunder.

IT IS THEREFORE ORDERED, pursuant to Section 19(b)(2) of the Exchange Act,[54] that the Proposed Rule Change (SR-OCC-2022-001) be, and hereby is, approved.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[55]

J. Matthew DeLesDernier,
Deputy Secretary.

---

53 In approving this Proposed Rule Change, the Commission has considered the proposed rules' impact on efficiency, competition, and capital formation. See 15 U.S.C. 78c(f).

54 15 U.S.C. 78s(b)(2).

55 17 CFR 200.30-3(a)(12).