

SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-95294; File No. SR-OCC-2022-801)

July 15, 2022

Self-Regulatory Organizations; The Options Clearing Corporation; Notice of No Objection to Advance Notice 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”) advance notice SR-OCC-2022-801 (“Advance Notice”) pursuant to Section 806(e)(1) of Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act, entitled Payment, Clearing and Settlement Supervision Act of 2010 (“Clearing Supervision Act”)¹ and Rule 19b-4(n)(1)(i)² under the Securities Exchange Act of 1934 (“Exchange Act”)³ to change quantitative models related to certain volatility products.⁴ The Advance Notice was published for public comment in the Federal Register on February 11, 2022,⁵ and the

¹ 12 U.S.C. 5465(e)(1).

² 17 CFR 240.19b-4(n)(1)(i).

³ 15 U.S.C. 78a et seq.

⁴ See Notice of Filing infra note 5, at 87 Fed. Reg. 8063.

⁵ Securities Exchange Act Release No. 94166 (Feb. 7, 2022), 87 Fed. Reg. 8063 (Feb. 11, 2022) (File No. SR-OCC-2022-801) (“Notice of Filing”). On January 24, 2022, OCC also filed a related proposed rule change (SR-OCC-2022-001) with the Commission pursuant to Section 19(b)(1) of the Exchange Act and Rule 19b-4 thereunder (“Proposed Rule Change”). 15 U.S.C. 78s(b)(1) and 17 CFR 240.19b-4, respectively. In the Proposed Rule Change, which was published in the Federal Register on February 11, 2022, OCC seeks approval of proposed changes to its rules necessary to implement the Advance Notice. Securities Exchange Act Release No. 94165 (Feb. 7, 2022), 87 Fed. Reg. 8072 (Feb. 11, 2022) (File No. SR-OCC-2022-001). The initial comment period for the related

Commission has received comments regarding the changes proposed in the Advance Notice.⁶

On March 24, 2022, pursuant to Section 806(e)(1)(H) of the Clearing Supervision Act,⁷ the Commission extended the review period for the Advance Notice for an additional 60 days because the Commission found the issues raised by the Advance Notice to be complex.⁸ Notice of the extension was published in the Federal Register on March 30, 2022.⁹

On May 24, 2022, the Commission requested additional information for consideration of the Advance Notice from OCC, pursuant to Section 806(e)(1)(D) of the Clearing Supervision Act,¹⁰ which tolled the Commission's period of review of the

Proposed Rule Change filing closed on March 4, 2022. The Commission solicited further comment when it subsequently instituted proceedings to determine whether to approve or disapprove the Proposed Rule Change. The additional comment period closed on June 22, 2022. See Securities Exchange Act Release No. 94900 (May 12, 2022), 87 Fed. Reg. 30284 (May 18, 2022) (File No. SR-OCC-2022-001).

⁶ Comments on the Advance Notice are available at <https://www.sec.gov/comments/sr-occ-2022-801/srocc2022801.htm>. Since the proposal contained in the Advance Notice was also filed as a proposed rule change, all public comments received on the proposal are considered regardless of whether the comments are submitted on the Proposed Rule Change or the Advance Notice. Comments on the Proposed Rule Change are available at <https://www.sec.gov/comments/sr-occ-2022-001/srocc2022001.htm>.

⁷ 12 U.S.C. 5465(e)(1)(H).

⁸ See Securities Exchange Act Release No. 94504 (Mar. 24, 2022), 87 Fed. Reg. 18414 (Mar. 30, 2022) (File No. SR-OCC-2022-801).

⁹ Id.

¹⁰ 12 U.S.C. 5465(e)(1)(D).

Advance Notices until 120 days from the date the information required by the Commission was received by the Commission.¹¹ On June 22, 2022, the Commission received OCC’s response to the Commission’s request for additional information.¹² The Commission is hereby providing notice of no objection to the Advance Notice.

II. BACKGROUND¹³

The System for Theoretical Analysis and Numerical Simulations (“STANS”) is OCC’s methodology for calculating margin.¹⁴ 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

¹¹ See 12 U.S.C. 5465(e)(1)(E)(ii) and (G)(ii); Memorandum from the Office of Clearance and Settlement Supervision, Division of Trading and Markets, titled “Commission’s Request for Additional Information,” available at <https://www.sec.gov/comments/sr-occ-2022-801/srocc2022801-20129507-295740.pdf>.

¹² See 12 U.S.C. 5465(e)(1)(E)(ii) and (G)(ii); Memorandum from the Office of Clearance and Settlement Supervision, Division of Trading and Markets, titled “Response to the Commission’s Request for Additional Information,” available at <https://www.sec.gov/comments/sr-occ-2022-801/srocc2022801-20132694-303185.pdf>.

¹³ 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>.

¹⁴ 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”).

equity securities; however, a number of other risk factors may be considered, including, among other things, returns on implied volatility.¹⁵

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 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.¹⁶ As described below, and in more detail in the Notice of Filing, 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 (such index hereinafter referred to as "S&P 500" and such proposed model being the "S&P 500 Implied Volatility Simulation Model");
- (2) implement a new model to calculate the theoretical values of futures on indexes designed to measure volatilities implied by prices of options on a particular underlying index (such indexes being "Volatility Indexes"; futures contracts on such Volatility Indexes being "Volatility Index

¹⁵ 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).

¹⁶ See STANS Methodology Approval, 86 Fed. Reg. at 9411.

Futures”); and such proposed model being the “Volatility Index Futures Model”); and

- (3) replace OCC’s model to calculate the theoretical values of exchange-traded futures contracts based on the expected realized variance of an underlying interest (such contracts being “Variance Futures,” and 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 contracts¹⁷ available to be cleared by OCC that have a residual tenor¹⁸ 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.¹⁹ 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

¹⁷ 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.

¹⁸ The “tenor” of an option is the amount of time remaining to its expiration.

¹⁹ See Notice of Filing, 87 Fed. Reg. at 8065.

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.²⁰

Volatility of volatility forecasting. In the current Implied Volatilities Scenarios Model, OCC uses a GARCH model²¹ to forecast the volatility of implied volatility risk factors.²² 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.²³ OCC's current Implied Volatilities Scenarios Model relies on an exponentially weighted moving average²⁴ of forecasted volatilities over a specified look-back period to reduce the

²⁰ See Notice of Filing, 87 Fed. Reg. at 8066, n. 32.

²¹ 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).

²² See Notice of Filing, 87 Fed. Reg. at 8064.

²³ See Notice of Filing, 87 Fed. Reg. at 8065.

²⁴ 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 15. 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).

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.²⁵

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.²⁶

Volatility surface discontinuities. The current Implied Volatilities Scenarios Model relies on a "nearest neighbor" method to map the implied volatility surface between reference points.²⁷ 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

²⁵ See Notice of Filing, 87 Fed. Reg. at 8065.

²⁶ See Notice of Filing, 87 Fed. Reg. at 8068.

²⁷ 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.

implied volatility in simulated scenarios, which OCC states is unrealistic.²⁸ 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 moneyness²⁹ dimensions.³⁰ 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 arbitrage-free condition.³¹ 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

²⁸ See Notice of Filing, 87 Fed. Reg. at 8065.

²⁹ 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 8064, n. 13.

³⁰ Key risk factors driving the implied volatility surface are explicitly modeled within the model itself. See Notice of Filing, 87 Fed. Reg. at 8067.

³¹ See Notice of Filing, 87 Fed. Reg. at 8065.

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.³² 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.³³ As noted above, OCC now proposes to implement its new

³² See Notice of Filing, 87 Fed. Reg. at 8068. 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 8067.

³³ 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-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

Volatility Index 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).³⁴

In the Notice of Filing, OCC stated that its current Synthetic Futures Model is subject to certain limitations and issues.³⁵ 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.

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

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).

³⁴ 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 8065, n. 26.

³⁵ See Notice of Filing, 87 Fed. Reg. at 8066.

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.³⁶

As described in the confidential exhibits OCC submitted with the Advance Notice, 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 would be based on a replication technique using the log-contract to price variance futures similar to the proposed Volatility Index Futures Model.³⁷

³⁶ See Cboe, VIX White Paper (2019), available at <https://www.cboe.com/micro/vix/vixwhite.pdf>.

³⁷ 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,

OCC believes that its current model for margining variance futures has several disadvantages.³⁸ 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.³⁹ 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.⁴⁰

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 Model. As described in the confidential exhibits OCC submitted with the Advance Notice, this would significantly reduce long-side coverage exceedances relative to the current model while maintaining coverage for periods of low and high

2012), available at <http://www.cboe.com/products/futures/va-s-p-500-variance-futures/contract-specifications>.

³⁸ See Notice of Filing, 87 Fed. Reg. at 8066.

³⁹ 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.

⁴⁰ See Notice of Filing, 87 Fed. Reg. at 8066.

volatility. It would also offer offsets for variance futures with the options of the same underlying security.

III. DISCUSSION AND NOTICE OF NO OBJECTION

Although the Clearing Supervision Act does not specify a standard of review for an advance notice, the stated purpose of the Clearing Supervision Act is instructive: to mitigate systemic risk in the financial system and promote financial stability by, among other things, promoting uniform risk management standards for SIFMUs and strengthening the liquidity of SIFMUs.⁴¹

Section 805(a)(2) of the Clearing Supervision Act authorizes the Commission to prescribe regulations containing risk management standards for the payment, clearing, and settlement activities of designated clearing entities engaged in designated activities for which the Commission is the supervisory agency.⁴² Section 805(b) of the Clearing Supervision Act provides the following objectives and principles for the Commission's risk management standards prescribed under Section 805(a):⁴³

- to promote robust risk management;
- to promote safety and soundness;
- to reduce systemic risks; and
- to support the stability of the broader financial system.

⁴¹ See 12 U.S.C. 5461(b).

⁴² 12 U.S.C. 5464(a)(2).

⁴³ 12 U.S.C. 5464(b).

Section 805(c) provides, in addition, that the Commission’s risk management standards may address such areas as risk management and default policies and procedures, among other areas.⁴⁴

The Commission has adopted risk management standards under Section 805(a)(2) of the Clearing Supervision Act and Section 17A of the Exchange Act (the “Clearing Agency Rules”).⁴⁵ The Clearing Agency Rules require, among other things, each covered clearing agency to establish, implement, maintain, and enforce written policies and procedures that are reasonably designed to meet certain minimum requirements for its operations and risk management practices on an ongoing basis.⁴⁶ As such, it is appropriate for the Commission to review advance notices against the Clearing Agency Rules and the objectives and principles of these risk management standards as described in Section 805(b) of the Clearing Supervision Act. As discussed below, the Commission believes the changes proposed in the Advance Notice are consistent with the objectives and principles described in Section 805(b) of the Clearing Supervision Act,⁴⁷ and in the Clearing Agency Rules, in particular Rule 17Ad-22(e)(6).⁴⁸

⁴⁴ 12 U.S.C. 5464(c).

⁴⁵ 17 CFR 240.17Ad-22. See Securities Exchange Act Release No. 68080 (Oct. 22, 2012), 77 Fed. Reg. 66220 (Nov. 2, 2012) (S7-08-11). See also Covered Clearing Agency Standards, 81 Fed. Reg. 70786. OCC is a “covered clearing agency” as defined in Rule 17Ad-22(a)(5).

⁴⁶ 17 CFR 240.17Ad-22.

⁴⁷ 12 U.S.C. 5464(b).

⁴⁸ 17 CFR 240.17Ad-22(e)(6).

A. Consistency with Section 805(b) of the Clearing Supervision Act

The Commission believes that the proposal contained in OCC's Advance Notice is consistent with the stated objectives and principles of Section 805(b) of the Clearing Supervision Act. Specifically, as discussed below, the Commission believes that the changes proposed in the Advance Notice are consistent with promoting robust risk management, promoting safety and soundness, reducing systemic risks, and supporting the stability of the broader financial system.⁴⁹

The Commission believes that the Advance Notice is consistent with promoting robust risk management as well as safety and soundness because, based on the confidential information provided by OCC and reviewed by the Commission, 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. Additionally, providing for such offsets could reduce the likelihood that Clearing Members would be required to provide additional financial resources

⁴⁹ 12 U.S.C. 5464(b).

unnecessarily, which, in turn, could reduce the strain on such members during stress market conditions.

Further, the Commission believes that, to the extent the proposed changes are consistent with promoting OCC's safety and soundness, they are also consistent with supporting the stability of the broader financial system. OCC has been designated as a SIFMU, in part, because its failure or disruption could increase the risk of significant liquidity or credit problems spreading among financial institutions or markets.⁵⁰ The Commission believes that the proposed changes would support OCC's ability to continue providing services to the options markets by addressing losses and shortfalls arising out of the default of a Clearing Member. OCC's continued operations would, in turn, help support the stability of the financial system by reducing the risk of significant liquidity or credit problems spreading among market participants that rely on OCC's central role in the options market.

Accordingly, and for the reasons stated above, the Commission believes the changes proposed in the Advance Notice are consistent with Section 805(b) of the Clearing Supervision Act.⁵¹

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

Rule 17Ad-22(e)(6)(i) 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

⁵⁰ See Financial Stability Oversight Council ("FSOC") 2012 Annual Report, Appendix A, <https://home.treasury.gov/system/files/261/here.pdf> (last visited Feb. 17, 2022).

⁵¹ 12 U.S.C. 5464(b).

counterparty services, its credit 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 market⁵² 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.⁵³

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.⁵⁴ 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

⁵² 17 CFR 240.17Ad-22(e)(6)(i).

⁵³ 17 CFR 240.17Ad-22(e)(6)(iii).

⁵⁴ 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 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. 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,⁵⁵ 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."⁵⁶ The commenter's assertions, however, are inconsistent with the confidential

⁵⁵ See Notice of Filing, at 87 Fed. Reg. 8063.

⁵⁶ 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

performance data provided by OCC. 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.⁵⁷ 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.⁵⁸

Accordingly, the Commission believes that the proposed model changes are consistent with Rule 17Ad-22(e)(6) under the Exchange Act.⁵⁹

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.

⁵⁷ See supra footnote 54.

⁵⁸ 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.

⁵⁹ 17 CFR 240.17Ad-22(e)(6).

IV. CONCLUSION

IT IS THEREFORE NOTICED, pursuant to Section 806(e)(1)(I) of the Clearing Supervision Act, that the Commission DOES NOT OBJECT to Advance Notice (SR-OCC-2022-801) and that OCC is AUTHORIZED to implement the proposed change as of the date of this notice or the date of an order by the Commission approving proposed rule change SR-OCC-2022-001, whichever is later.

By the Commission.

J. Matthew DeLesDernier
Assistant Secretary