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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-86103; File No. SR-OCC-2019-802]

Self-Regulatory Organizations; The Options Clearing Corporation; Notice of No Objection to Advance Notice Related to the Introduction of a New Liquidation Cost Model in The Options Clearing Corporation's Margin Methodology

June 13, 2019

I.   INTRODUCTION

On April 18, 2019, The Options Clearing Corporation ("OCC") filed with the Securities and Exchange Commission ("Commission") advance notice SR-OCC-2019-802 ("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 propose changes to its margin methodology to introduce a new model to estimate the liquidation cost for all options and futures, as well as the securities in margin collateral.[4]   The Advance Notice was published for public comment in the Federal Register on May 21, 2019,[5] and the Commission has received no comments regarding the proposal contained

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[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 83 FR 23090.

[5]   Securities Exchange Act Release No. 85863 (May 15, 2019), 83 FR 23090 (May 21, 2019) (SR-OCC-2019-802)("Notice of Filing").   On April 18, 2019, OCC also filed a related proposed rule change (SR-OCC-2019-004) with the Commission pursuant to Section 19(b)(1) of the Exchange Act and Rule 19b-4 thereunder, seeking approval of changes to its rules necessary to implement the Advance Notice ("Proposed Rule Change"),   15 U.S.C. 78s(b)(1) and 17 CFR 240.19b-4, respectively.   The Proposed Rule Change was published in the Federal Register on May 6, 2019. Securities Exchange Act Release No. 85755 (Apr. 30, 2019), 84 FR 19815 (May 6, 2019). The comment period for the related Proposed Rule Change filing closed on May 27, 2019.

in the Advance Notice.[6] This publication serves as notice of no objection to the Advance Notice.

II.   BACKGROUND

The System for Theoretical Analysis and Numerical Simulations ("STANS") is OCC's methodology for calculating margin requirements. OCC uses the STANS methodology to measure the exposure of portfolios of options and futures cleared by OCC and of cash instruments that are part of margin collateral. STANS margin requirements are intended to cover potential losses due to price movements over a two-day risk horizon; however, the current STANS margin requirements do not cover the potential additional liquidation costs OCC may incur in closing out a defaulted Clearing Member's portfolio.[7] Closing out positions in a defaulted Clearing Member's portfolio could entail selling longs at the bid price and covering shorts at the ask price. Additionally, even well-hedged portfolios consisting of offsetting longs and shorts would require some cost to liquidate in the event of a default. The process of modeling liquidation costs is, therefore, relevant to ensuring that OCC holds sufficient financial resources to close-out the portfolio of a defaulted Clearing Member.

OCC is proposing to introduce a new model to its margin methodology to estimate the liquidation cost for all options and futures, as well as cash instruments that are part of margin

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[6]   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.

[7]   OCC previously introduced a liquidation cost model into STANS for risk managing only long-dated options on the Standard & Poor's ("S&P") 500 index ("SPX") that have a tenor of three-years or more. See Securities Exchange Act Release No. 70719 (October 18, 2013), 78 FR 63548 (October 24, 2013) (SR-OCC-2013-16). Under the proposal described in the Advance Notice, OCC would replace the existing liquidation model for long-dated SPX options with the proposed model. Long-dated SPX options, however, constituted less than 0.5 percent of open interest in SPX options open interest at the time of filing. See Notice of Filing, 84 FR at 23091, note 8.

collateral. According to OCC, the purpose of this proposal is to collect additional financial resources to guard against potential shortfalls in margin requirements that may arise due to the costs of liquidating the portfolio of a defaulted Clearing Member.[8] The liquidation cost charge would be an add-on to all accounts incurring a STANS margin charge. At a high level, the proposed model would estimate the cost to liquidate a portfolio based on the mid-points of the bid-ask spreads for the financial instruments within the portfolio, and would scale up such liquidation costs for large or concentrated positions that would likely be more expensive to close out.

OCC's proposed liquidation cost model would calculate liquidation costs based on risk measures, gross contract volumes, and market bid-ask spreads. As described in the Advance Notice, the liquidation cost model would include the following components: (1) calculation of liquidation costs for each sub-portfolio (as described below), which would then be aggregated at the portfolio level; (2) calculation of concentration charges that would be applied to scale-up the liquidation costs as appropriate; and (3) establishment of the liquidation cost as a floor on a Clearing Member's margin requirement.[9]

A. Liquidation Costs

The proposed model would calculate two risk-based liquidation costs for a portfolio: (1) the Vega[10] liquidation cost ("Vega LC"), and (2) the Delta[11] liquidation cost ("Delta LC").

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[8] See Notice of Filing, 84 FR at 23091.

[9] OCC also proposes a conforming change to its Margin Policy, which would reference OCC's model documentation.

[10] The Vega of an option represents the sensitivity of the option price to the volatility of the underlying security.

Options products would incur both a Vega LC and a Delta LC, while Delta-one products,[12] such as futures contracts, Treasury securities, and equity securities, would incur only a Delta LC.

The process of calculating the Vega LC and the Delta LC for each portfolio would require a series of steps, beginning with the decomposition of each portfolio into a set of sub-portfolios based on the asset underlying each instrument in the portfolio. Each sub-portfolio would represent a class of instruments. As proposed, the model would include 14 potential classes of underlying assets based on the liquidity of the assets within each class.[13]

a. Vega Liquidation Cost

To calculate the Vega LC of a sub-portfolio, OCC would group contracts within a sub-portfolio into "buckets" based on each contract's combination of tenor and Delta.[14] OCC would then net the long and the short positions down to a single net Vega within each bucket. Next, OCC would estimate the average volatility spread (i.e., the estimated bid-ask spread on implied

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[11]   The Delta of an option represents the sensitivity of the option price to the price of the underlying security.

[12]   A "Delta-one product" refers to a product for which a change in the value of the underlying asset results in a change of the same, or nearly the same, proportion in the value of the product.

[13]   For example, equity securities would be divided based on membership in commonly used market indices (e.g., the S&P 100) or other market liquidity measures, into liquidity classes (which could include, but would not be limited to, High Liquid Equities, Medium Liquid Equities, and Low Liquid Equities).

[14]   For example, those options contracts with a tenor of 1 month and a Delta between 0.25 and 0.75 could be grouped in one bucket within a sub-portfolio, while option contracts with a tenor of 3 month and a Delta between 0.25 and 0.75 would be grouped in another bucket. The proposed model would provide for 25 buckets (based on combinations of tenor and Delta) for each sub-portfolio.

volatility) of the contracts in each bucket.[15] The Vega LC of each bucket would be the net Vega multiplied by the average volatility spread of the bucket. The Vega LC of a sub-portfolio would be the aggregated Vega LCs of the buckets within that sub-portfolio. Similarly, the Vega LC of the full portfolio would be the aggregated Vega LCs of the sub-portfolios within that portfolio.[16]

Under the proposed model, the Vega LC calculation process could result in a portfolio-level Vega LC of zero because the process permits offsets between contracts. To prevent such a result, OCC proposes including a minimum Vega LC based on the number of contracts in each sub-portfolio. The minimum Vega LC of a sub-portfolio would be the total number of option contracts in the sub-portfolio multiplied by a fixed dollar amount.[17]

b. Delta Liquidation Cost

Similar to the Vega LC process, the model would calculate Delta LC for each sub-portfolio, which would then be aggregated at the portfolio level. OCC would first identify and net down the Delta of the positions within each sub-portfolio. For each sub-portfolio, OCC

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[15] Rather than recalibrate the volatility spread of each bucket as current market conditions change, the estimated volatility spread of each bucket within a sub-portfolio would be calibrated based on data from historical periods of market stress.

[16] The process for aggregating Vega LCs, of both sub-portfolios and portfolios, under the proposed model is based on the correlations of either the bucket or the sub-portfolio being aggregated. To simplify the portfolio-level aggregation, the proposed model would use a single correlation value across all sub-portfolios in a given portfolio rather than a correlation matrix. To account for potential errors that could arise out of such a simplification, the proposed model would require the calculation of three portfolio-level Vega LCs based on the three different correlation values (i.e., minimum, maximum, and average). The portfolio Vega LC would be the highest of the three Vega LCs calculated in this manner.

[17] Specifically, the minimum cost rate would initially be set as two dollars per contract, unless the position is long and the net asset value per contract is less than $2.00. (For a typical option with a contract size of 100, this would occur if the option was priced below $0.02.)

would estimate a bid-ask price spread (as a percentage). Such a percentage would represent the cost of liquidating one dollar unit of the underlying security during a period of market stress. The sub-portfolio Delta LC would be the net dollar Delta of the sub-portfolio multiplied by the bid-ask price spread percentage.[18] The portfolio-level Delta LC would be the simple sum of the sub-portfolio Delta LCs.

B. Concentration Charges

The proposed model would also address the potential risks involved in closing out large or concentrated positions in a portfolio. The size of an open position is typically measured against the relevant instrument's average daily trading volume ("ADV"). Closing out a position in excess of the ADV would be expected to increase the cost of liquidation. To account for such considerations, the proposed model incorporates a Vega concentration factor and a Delta concentration factor. The concentration factors would be used to scale the Vega LCs and the Delta LCs of each sub-portfolio and to take into account the additional risk posed by large or concentrated positions. The concentration factor could increase, but would not decrease the Vega LCs and the Delta LCs.

C. Margin Floor

As noted above, the liquidation cost charge (i.e., sum of the portfolio-level Vega LC and Delta LC) would be applied as an add-on to the STANS margin requirement for each account. Because STANS margin requirements are intended to cover potential losses due to price movements over a two-day risk horizon, the STANS requirement for well-hedged portfolios may

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[18] As described in the Notice of Filing, the process for determining the Delta LC of a sub-portfolio of U.S. dollar Treasury bonds would be different. Specifically, it would be based on the sum of Delta LCs across six tenor buckets. See Notice of Filing, 84 FR at 23093.

be positive, which could result in a margin credit instead of a charge.

To account for the risk of potentially liquidating a portfolio at current (instead of two-day ahead) prices, OCC proposes to design the model such that it would not permit a margin credit to offset a portfolio's liquidation cost. Under the proposal, therefore, the final margin requirement for a portfolio could not be lower than its liquidation cost charge.

III. DISCUSSION AND COMMISSION FINDINGS

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 systemically important financial market utilities ("SIFMUs") and strengthening the liquidity of SIFMUs.[19]

Section 805(a)(2) of the Clearing Supervision Act[20] 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. Section 805(b) of the Clearing Supervision Act[21] provides the following objectives and principles for the Commission's risk-management standards prescribed under Section 805(a):

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

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[19] See 12 U.S.C. 5461(b).

[20] 12 U.S.C. 5464(a)(2).

[21] 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 others areas.[22]

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").[23] 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.[24] 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 proposal in the Advance Notice is consistent with the objectives and principles described in Section 805(b) of the Clearing Supervision Act,[25] and in the Clearing Agency Rules, in particular Rule 17Ad-22(e)(6)(i).[26]

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[22]   12 U.S.C. 5464(c).

[23]   17 CFR 240.17Ad-22. See Securities Exchange Act Release No. 68080 (October 22, 2012), 77 FR 66220 (November 2, 2012) (S7-08-11). See also Securities Exchange Act Release No. 78961 (September 28, 2016), 81 FR 70786 (October 13, 2016) (S7-03-14) ("Covered Clearing Agency Standards"). The Commission established an effective date of December 12, 2016 and a compliance date of April 11, 2017 for the Covered Clearing Agency Standards. OCC is a "covered clearing agency" as defined in Rule 17Ad-22(a)(5).

[24]   17 CFR 240.17Ad-22.

[25]   12 U.S.C. 5464(b).

[26]   17 CFR 240.17Ad-22(e)(6)(i).

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

The Commission believes that the Advance Notice is consistent with the stated objectives and principles of Section 805(b) of the Clearing Supervision Act. First, the Commission believes that adoption of the proposed liquidation cost model would be consistent with the promotion of robust risk management at OCC in several ways. In closing out a defaulted Clearing Member's portfolio, OCC would likely incur costs associated with the liquidation process. OCC's current margin methodology calculates margin requirements designed to cover potential losses due to price movements over a two-day risk horizon. It is not designed, however, to account for liquidation costs that OCC could incur in the process of closing out a defaulted Clearing Member's portfolio. As described above, OCC proposes to adopt a model designed to estimate the margin necessary to cover liquidation costs that OCC could incur when closing out a defaulted Clearing Member's portfolio. Adopting a model that allows for measurement of a risk not captured elsewhere in OCC's margin methodology would provide for more comprehensive management of OCC's risks in managing a Clearing Member default.

Moreover, the Commission believes that the inclusion of concentration charges in the proposed liquidation cost model would also be consistent with the promotion of robust risk management at OCC. The cost of liquidating a defaulted Clearing Member's portfolio is, in part, a function of market prices and market depth present at the time of the Clearing Member's default. The process of liquidating on a compressed timeframe a large or concentrated position during such a period could negatively affect such market prices for OCC. In recognition of such costs, OCC proposes to use concentration factors to scale up both the Vega LCs and Delta LCs based on the size of a defaulted Clearing Member's positions relative to the average daily volume of the financial instruments in the defaulted Clearing Member's portfolio. Including

concentration charges in OCC's proposed liquidation cost model would be consistent with the promotion of robust risk management by acknowledging and attempting to address issues of market depth in the model.

In addition, the Commission believes that the use of the proposed liquidation cost model to create a margin floor would be consistent with promoting robust risk management at OCC. OCC's margin methodology may produce a credit for well-hedged portfolios because it is focused on the potential losses resulting from price movements over a two-day risk horizon. OCC could, however, incur costs in the process of closing out a defaulted Clearing Member's portfolio at current prices, rather than prices two days into the future. OCC's proposal acknowledges this potential gap by requiring that a Clearing Member post, at a minimum, margin to cover the liquidation cost of its portfolio. Adopting rules designed to cover costs that OCC may incur in closing out a defaulted Clearing Member's portfolio at current prices, in addition to potential future losses, would be consistent with the promotion of robust risk management at OCC by increasing the likelihood that OCC would have sufficient financial resources to manage the default of a Clearing Member.

Second, the Commission believes that enhancing OCC's ability to manage the default of a Clearing Member through the calculation of liquidation costs and the use of concentration charges to take into account the additional risk posed by large or concentrated positions to OCC would be consistent with the promotion of safety and soundness. The OCC would apply concentration charges to increase the Vega LCs and Delta LCs relative to the size and concentration of positions within a Clearing Member's portfolio. The Commission believes that setting the proposed model as a margin floor would also be consistent with the promotion of safety and soundness. The amendments to the margin model proposed in the Advance Notice

should provide OCC with additional resources on which it could rely to manage the potential credit losses arising out of the default of a Clearing Member. By increasing its available financial resources, OCC would decrease the likelihood that a default would exceed OCC's resources and threaten the safety and soundness of OCC's ongoing operations.

Finally, the Commission believes that the proposal is generally consistent with reducing systemic risk and supporting the broader financial system. As discussed above, OCC proposes to identify and manage the potential cost of liquidating a defaulted Clearing Member's portfolio. OCC's estimation of such potential costs would be calibrated based on historical periods of market stress. OCC proposes to collect resources designed to cover such costs in the form of margin. Collecting additional margin to support OCC's ability to close out a default Clearing Member's portfolio during a period of market stress could reduce the potentiality that OCC would mutualize a loss arising out of the close-out process. While unavoidable under certain circumstances, reducing the potentiality of loss mutualization during periods of market stress could reduce the potential knock-on effects to non-defaulting Clearing Members, their customers and the broader options market arising out of a Clearing Member default. The Commission believes, therefore, that adoption of a liquidation cost model calibrated based on periods of market stress would be consistent with the reduction of systemic risk and supporting the stability of the broader financial system.

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.[27]

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[27]   12 U.S.C. 5464(b).

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

Rule 17Ad-22(e)(6)(i) under the Exchange Act requires, in part, 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 exposures to its participants by establishing a risk-based margin system that, at a minimum, considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.[28]

As described above, the liquidation cost that OCC could incur in the process of closing out a Clearing Member's portfolio is, in part, a function of the spread between the bid and the ask prices of financial instruments within the portfolio. The STANS methodology attempts to address potential losses resulting from changes in price over a two-day period. As described above, however, STANS is not designed to account for liquidation costs. OCC's proposed model would be designed to account for particular attributes of the products in a defaulted Clearing Member's portfolio, including the bid-ask spreads and average daily volume of such products.[29] Further, the proposal would acknowledge the purpose of the proposed liquidation cost model as distinct from the STANS methodology by using the proposed liquidation cost model as a floor on a Clearing Member's margin requirements.

OCC's proposal would be tailored to the particular attributes of products in a Clearing Member's portfolio. As described above, OCC would use the proposed model to calculate two

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[28]   17 CFR 240.17Ad-22(e)(6)(i).

[29]   As noted above, OCC proposes to incorporate the proposed model into its margin methodology documentation and to reference the margin add-on in its Margin Policy.

risk-based liquidation costs for each portfolio: (1) the Vega LC and (2) the Delta LC.[30] The Commission believes, therefore, that the adoption of the proposed liquidation cost model designed to produce margin levels commensurate with the risks of liquidating a Clearing Member's portfolio is consistent with Exchange Act Rule 17Ad-22(e)(6)(i).[31]

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-2019-802) 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-2019-004, whichever is later.

By the Commission.

Eduardo A. Aleman
Deputy Secretary

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[30]   Options products would incur both a Vega LC and a Delta LC, while Delta-one products such as futures contracts, Treasury securities, and equity securities would incur only a Delta LC.

[31]   17 CFR 240.17Ad-22(e)(6)(i).

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