This document is scheduled to be published in the
Federal Register on 06/21/2019 and available online at
https://federalregister.gov/d/2019-13113, and on **govinfo.gov**

8011-01P

SECURITIES AND EXCHANGE COMMISSION
[Release No. 34-86119; File No. SR-OCC-2019-004)]
Self-Regulatory Organizations; The Options Clearing Corporation; Order Approving Proposed Rule Change Related to the Introduction of a New Liquidation Cost Model in The Options Clearing Corporation's Margin Methodology

June 17, 2019

I. INTRODUCTION

On April 18, 2019, the Options Clearing Corporation ("OCC") filed with the Securities and Exchange Commission ("Commission") the proposed rule change SR-OCC-2019-004 ("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 propose changes to OCC's 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.[3]

The Proposed Rule Change was published for public comment in the Federal Register on May 6, 2019,[4] and the Commission received no comments regarding the Proposed Rule Change. This order approves the Proposed Rule Change.

---

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

2 17 CFR 240.19b-4.

3 See Notice of Filing infra note 4, at 84 FR 19815.

4 Securities Exchange Act Release No. 85755 (Apr. 30, 2019), 84 FR 19815 (May 6, 2019) (SR-OCC-2019-004) ("Notice of Filing"). OCC also filed a related advance notice (SR-OCC-2019-802) ("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 May 21, 2019. Securities Exchange Act Release No. 85863 (May 15, 2019), 84 FR 23090 (May 21, 2019) (SR-OCC-2019-802).

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.[5] 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 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

---

[5] 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 Proposed Rule Change, 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 19816, note 7.

costs of liquidating the portfolio of a defaulted Clearing Member.[6] 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 Proposed Rule Change, 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.[7]

A. Liquidation Costs

The proposed model would calculate two risk-based liquidation costs for a portfolio: (1) the Vega[8] liquidation cost ("Vega LC"), and (2) the Delta[9] liquidation cost ("Delta LC").

---

6 See Notice of Filing, 84 FR at 19816.

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

8 The Vega of an option represents the sensitivity of the option price to the volatility of the underlying security.

9 The Delta of an option represents the sensitivity of the option price to the price of the underlying security.

Options products would incur both a Vega LC and a Delta LC, while Delta-one products,[10] 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.[11]

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.[12] 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 volatility) of the contracts in each bucket.[13] The Vega LC of each bucket would be the net Vega

---

10 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.

11 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).

12 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.

13 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.

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.[14]

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.[15]

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 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

---

14 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.

15 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.)

bid-ask price spread percentage.[16] 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 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

---

16 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 19818.

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

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.[17] After carefully considering the Proposed Rule Change, the Commission finds 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)(F) of the Exchange Act[18] and Rule 17Ad-22(e)(6)(i) thereunder.[19]

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

Section 17A(b)(3)(F) of the Exchange Act requires that the rules of a clearing agency be designed to, among other things, assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible.[20] Based on its review of the record, the Commission believes that the proposed changes are designed to assure the safeguarding of securities and funds which are in OCC's custody or control for the reasons set forth below.

OCC manages its credit exposure to Clearing Members, in part, through the collection of

---

17 15 U.S.C. 78s(b)(2)(C).

18 15 U.S.C. 78q-1(b)(3)(F).

19 17 CFR 240.17Ad-22(e)(6)(i).

20 15 U.S.C. 78q-1(b)(3)(F).

collateral based on OCC's margin methodology. As noted above, OCC's current margin methodology is not designed to account for liquidation costs that OCC could incur in the process of closing out a defaulted Clearing Member's portfolio. 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. The Commission believes that adopting a model designed to identify and measure a risk not addressed elsewhere in OCC's margin methodology – namely, the cost to liquidate a defaulted Clearing Member's portfolio during periods of market stress – would improve OCC's margin methodology by generating margin requirements designed to more fully cover OCC's credit exposure to each of its Clearing Members.

Moreover, the Commission believes that the inclusion of concentration charges in the proposed liquidation cost model would enhance the measurement of risk described above. 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 further facilitate the generation of requirements designed to more fully cover OCC's credit exposure to each of its Clearing Members.

The Commission also believes that the use of the proposed liquidation cost model to create a margin floor would improve the management of OCC's credit exposures through the

collection of margin. 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.

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 assuring the safeguarding of securities and funds which are in OCC's custody or control or for which it is responsible consistent with the requirements of Section 17A(b)(3)(F) of the Exchange Act.[21]

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

[21] 15 U.S.C. 78q-1(b)(3)(F).

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.[22]

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.[23] 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 risk-based liquidation costs for each portfolio: (1) the Vega LC and (2) the Delta LC. 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

---

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

23 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.

Member's portfolio is consistent with Exchange Act Rule 17Ad-22(e)(6)(i).[24]

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[25] and the rules and regulations thereunder.

IT IS THEREFORE ORDERED, pursuant to Section 19(b)(2) of the Exchange Act,[26] that the Proposed Rule Change (SR-OCC-2019-004) be, and hereby is, approved.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[27]

Vanessa A. Countryman,
Acting Secretary.

---

24 17 CFR 240.17Ad-22(e)(6)(i).

25 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).

26 15 U.S.C. 78s(b)(2).

27 17 CFR 200.30-3(a)(12).

[FR Doc. 2019-13113 Filed: 6/20/2019 8:45 am; Publication Date: 6/21/2019]