

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-99393; File No. SR-OCC-2024-001)

January 19, 2024

Self-Regulatory Organizations; The Options Clearing Corporation; Notice of Filing of Proposed Rule Change by The Options Clearing Corporation Concerning Its Process for Adjusting Certain Parameters in Its Proprietary System for Calculating Margin Requirements During Periods When the Products It Clears and the Markets It Serves Experience High Volatility

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Exchange Act” or “Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on January 10, 2024, The Options Clearing Corporation (“OCC”) filed with the Securities and Exchange Commission (“SEC” or “Commission”) the proposed rule change as described in Items I, II, and III below, which Items have been prepared primarily by OCC. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Clearing Agency’s Statement of the Terms of Substance of the Proposed Rule Change

This proposed rule change would codify OCC’s process for adjusting certain parameters in its proprietary system for calculating margin requirements during periods when the products OCC clears and the markets it serves experience high volatility. Proposed changes to OCC’s Margin Policy are submitted in Exhibit 5 to File No. SR-OCC-2024-001. Material proposed to be added is marked by underlining and material proposed to be deleted is marked with strikethrough text. All terms with initial

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<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 17 CFR 240.19b-4.

capitalization that are not otherwise defined herein have the same meaning as set forth in the OCC By-Laws and Rules.<sup>3</sup>

II. Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, OCC included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. OCC has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of these statements.

(A) Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

OCC is the sole clearing agency for standardized equity options listed on national securities exchanges registered with the Commission. OCC also clears certain stock loan and futures transactions. In its role as a clearing agency, OCC guarantees the performance of its Clearing Members for all transactions cleared by OCC by becoming the buyer to every seller and the seller to every buyer (or the lender to every borrower and the borrower to every lender, in the case of stock loan transactions). These clearing activities could expose OCC to financial risks if a Clearing Member fails to fulfil its obligations to OCC. In its role as guarantor for all transactions cleared through OCC, one of the more material risks related to a Clearing Member's failure to perform is credit risk arising from the activity of the Clearing Members whose performance OCC guarantees. OCC manages these financial risks through financial safeguards, including the collection of margin collateral from Clearing Members designed to, among other things, address the

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<sup>3</sup> OCC's By-Laws and Rules can be found on OCC's public website: <https://www.theocc.com/Company-Information/Documents-and-Archives/By-Laws-and-Rules>.

market risk associated with a Clearing Member's positions during the period of time OCC has determined it would take to liquidate those positions.

OCC has established a proprietary system, the System for Theoretical Analysis and Numerical Simulation ("STANS"), that runs various models used to calculate each Clearing Member's margin requirements. One of OCC's margin models generates variance forecasts for the returns on individual equity securities, the result of which OCC then includes as one of the inputs to the margin calculation. As discussed in more detail below, OCC has observed that this particular model may produce results that are "procyclical," which means that changes in margin requirements produced by the model may be positively correlated with the overall state of the market and, if not appropriately addressed, could threaten the stability of its members during periods of heightened volatility.<sup>4</sup> For example, procyclicality may be evidenced by increasing margin in times of stressed market conditions and low margin when markets are calm. A sudden, extreme increase in margin requirements could stress a Clearing Member's ability to obtain liquidity to meet its obligations to OCC, particularly in periods of high volatility. If that Clearing Member subsequently defaulted, the resulting suspension and liquidation of the defaulting Clearing Member's positions could result in losses chargeable to the mutualized Clearing Fund.<sup>5</sup> Charging a loss to the Clearing Fund may result in

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<sup>4</sup> See Standards for Covered Clearing Agencies, Exchange Act Release No. 78961 (Sept. 28, 2016), 81 FR 70786, 70816 n.318 (S7-03-14) ("In this context, procyclicality typically refers to changes in risk-management practices that are positively correlated with market, business, or credit cycle fluctuations that may cause or exacerbate financial [in]stability.").

<sup>5</sup> A mutualized, pre-funded guaranty fund comprised of deposits from each member, such as OCC's Clearing Fund, is another financial safeguard commonly employed by central counterparties to address credit risk as the guarantor of the products it clears.

unexpected costs for non-defaulting Clearing Members, stressing their ability to obtain liquidity to meet their own financial obligations in stressed market conditions.

Regulations applicable to OCC require it to take certain measures with respect to its margin models during periods of time when the products cleared or markets served display high volatility. For example, the SEC’s Standards for Covered Clearing Agencies require OCC to establish policies and procedures related to the review of OCC’s model parameters<sup>6</sup> during periods of time when the products cleared or markets served display high volatility, report the results to appropriate decisionmakers, and use the results to evaluate the adequacy of and adjust its model parameters.<sup>7</sup> OCC understands that, in implementing standards for central counterparties, U.S. regulators chose not to adopt the types of prescriptive procyclicality controls codified by financial regulators in other jurisdictions.<sup>8</sup> Accordingly, regulatory guidance applicable to OCC provides that a

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<sup>6</sup> In general, a margin model parameter is a value estimated from market or portfolio data used by OCC’s margin models for the purpose of calculating Clearing Member margin requirements. The value of the parameter is associated with a specific point in time and may change based on updates to the data used in its estimation.

<sup>7</sup> See 17 CFR 240.17Ad-22(e)(6)(vi)(C), (D).

<sup>8</sup> Compare Standards for Covered Clearing Agencies, Exchange Act Release No. 78961, 81 FR at 70819 (“[A] covered clearing agency generally should consider in establish and maintaining policies and procedures for margin . . . whether the model . . . to the extent practicable and prudent, limits the need for destabilizing, procyclical changes.”), and Central Counterparty (CCP) Risk and Governance Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission (“CFTC”), Recommendations Regarding CCP Margin Methodologies, at 1 (Feb. 12, 2021), available at [https://www.cftc.gov/media/5776/GMAC\\_031121WFE/download](https://www.cftc.gov/media/5776/GMAC_031121WFE/download) (describing the CFTC’s “principle-based approach to addressing procyclical risk” under CFTC Regulation 39.13), with Article 41, Regulation (EU) No 648/2012 of 4 July 2012 of the European Parliament and Council on OTC derivatives, central counterparties and trade repositories (requiring CCPs to “regularly monitor and, if necessary, revise the level of its margins to reflect current market conditions taking into account any potentially procyclical effects of such revisions”), and Article 28, Regulatory technical standards on CCPs i.e. Commission Delegated Regulation (EU) No 153/2013 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council with regard to regulatory technical standards on requirements for CCPs (requiring CCPs to adopt one of three anti-procyclicality margin measures).

clearing agency should consider whether its margin model, “to the extent practicable and prudent, limits the need for destabilizing, procyclical changes.”<sup>9</sup>

To mitigate procyclical margin requirements during periods when OCC’s cleared products or the markets it serves experience high volatility, OCC has established regular and high volatility control settings under its margin methodology. OCC’s price return model employs bounds (i.e., the “control sets” implemented under regular or high volatility settings) for certain parameters that are calculated daily based on current market data.<sup>10</sup> When OCC implements high volatility control settings, those parameters are bounded differently than under regular control settings. In general, these control settings help to prevent significant overestimation of Clearing Member margin requirements.<sup>11</sup>

To determine when implementation of high volatility control settings may be appropriate, OCC monitors the volatility of the products it clears and the markets it serves. Based on the results of this monitoring, OCC may determine to implement high volatility control settings for those model parameters. Under OCC’s margin methodology, these high volatility control settings may be applied to individual securities, which are among several “risk factors” under OCC’s margin methodology, or globally across a class of risk factors (e.g., equities, indexes, volatility-based products, etc.).

OCC previously described its use of high volatility control settings within STANS in its filing to establish its STANS Methodology Description.<sup>12</sup> The STANS

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<sup>9</sup> Standards for Covered Clearing Agencies, Exchange Act Release No. 78961, 81 FR at 70819.

<sup>10</sup> See infra notes 25-28 (describing the parameters to which the bounds are applied).

<sup>11</sup> See infra notes 33-34 and accompanying text (detailing examples in which high volatility control settings were implemented).

<sup>12</sup> See infra notes 29-30 and accompanying text.

Methodology Description, however, does not provide specific details around the process for setting or applying high volatility control settings. To ensure that OCC's rules include a sufficient level of detail about material aspects of OCC's margin system, OCC proposes to amend its Margin Policy, which is filed as a rule with the Commission,<sup>13</sup> to define material aspects of the high volatility control setting process. This proposed rule change would amend the Margin Policy to describe the process, including: (1) how OCC sets and reviews the regular and high volatility control sets; (2) how OCC monitors for market volatility and idiosyncratic price moves and establishes thresholds to escalate the results of such monitoring for consideration of whether high volatility control settings are warranted; and (3) OCC's internal governance for implementing and terminating high volatility control settings. OCC does not believe that proposed revisions to its Margin Policy would have any practical effect on Clearing Members or other market participants because OCC is not proposing to change its current practices for setting member margin requirements.

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<sup>13</sup> See Exchange Act Release Nos. 99169 (Dec. 14, 2023), 88 FR 88163 (Dec. 20, 2023) (SR-OCC-2023-008); 98101 (Aug. 10, 2023), 88 FR 55775 (Aug. 16, 2023) (SR-OCC-2022-012); 96566 (Dec. 22, 2022), 87 FR 80207 (Dec. 29, 2022) (SR-OCC-2022-010); 91079 (Feb. 8, 2021), 86 FR 9410 (Feb. 12, 2021) (SR-OCC-2020-016); 90797 (Dec. 23, 2020), 85 FR 86592 (Dec. 30, 2020) (SR-OCC-2020-014); 87718 (Dec. 11, 2019), 84 FR 68992 (Dec. 17, 2019) (SR-OCC-2019-010); 86436 (July 23, 2019), 84 FR 36632 (July 29, 2019) (SR-OCC-2019-006); 86119 (June 17, 2019), 84 FR 29267 (June 21, 2019) (SR-OCC-2019-004); 83799 (Aug. 8, 2018), 83 FR 40379 (Aug. 14, 2018) (SR-OCC-2018-011); 82658 (Feb. 7, 2018), 83 FR 6646 (Feb. 14, 2018) (SR-OCC-2017-007).

(1) Purpose

**Background**

STANS is OCC's proprietary risk management system for calculating Clearing Member margin requirements.<sup>14</sup> The STANS methodology utilizes large-scale Monte Carlo simulations to forecast price and volatility movements in determining a Clearing Member's margin requirement.<sup>15</sup> STANS margin requirements are calculated at the portfolio level of each Clearing Member account with positions in marginable securities and is comprised of an estimate of a 99% expected shortfall<sup>16</sup> over a two-day time horizon, among other components. OCC uses the STANS methodology to measure the exposure of portfolios of products cleared by OCC and cash instruments in margin collateral.<sup>17</sup>

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<sup>14</sup> An overview of the STANS methodology is on OCC's public website: <https://www.theocc.com/Risk-Management/Margin-Methodology>.

<sup>15</sup> See OCC Rule 601.

<sup>16</sup> The expected shortfall component is established as the estimated average of potential losses higher than the 99% value at risk threshold. The term "value at risk" or "VaR" refers to a statistical technique that is used in risk management to measure the potential risk of loss for a given set of assets over a particular time horizon.

<sup>17</sup> Pursuant to OCC Rule 601(e)(1), OCC also calculates initial margin requirements for segregated futures accounts on a gross basis using the Standard Portfolio Analysis of Risk Margin Calculation System ("SPAN"). CFTC Regulation 39.13(g)(8), requires, in relevant part, that a derivatives clearing organization ("DCO") collect initial margin for customer segregated futures accounts on a gross basis. While OCC uses SPAN to calculate initial margin requirements for segregated futures accounts on a gross basis, OCC believes that margin requirements calculated on a net basis (i.e., permitting offsets between different customers' positions held by a Clearing Member in a segregated futures account using STANS) affords OCC additional protections at the clearinghouse level against risks associated with liquidating a Clearing Member's segregated futures account. As a result, OCC calculates margin requirements for segregated futures accounts using both SPAN on a gross basis and STANS on a net basis, and if at any time OCC staff observes a segregated futures account where initial margin calculated pursuant to STANS on a net basis exceeds the initial margin calculated pursuant to SPAN on a gross basis, OCC collateralizes this risk exposure by applying an additional margin charge in the amount of such difference to the account. See Exchange Act Release No. 72331 (June 5, 2014), 79 FR 33607 (June 11, 2014) (SR-OCC-2014-13).

Forecasted returns on individual risk factors are an input to OCC's calculation of margin requirements. A "risk factor" within STANS is a product or attribute whose historical data is used to estimate and simulate the risk for an associated product. Risk factors include the returns on individual equity securities, returns on equity indexes, and returns on implied volatility risk factors, among others.

OCC uses a GARCH<sup>18</sup> model to generate variance forecasts for price risk factors for all products and implied volatility with respect to certain products. Following February 5, 2018, when the market experienced extreme levels of volatility that caused a significant spike in margin requirements, OCC's analysis demonstrated that GARCH is extremely sensitive to sudden spikes in volatility, which can result in margin requirements that OCC believes are unreasonable and procyclical.<sup>19</sup> For example, OCC observed that its GARCH model for forecasting implied volatility<sup>20</sup> produced forecasts for particular S&P 500 Index ("SPX") options that were four-fold larger than the comparable market index. This led to margin requirements increasing by 80% overnight, with some margin requirements increasing ten-fold. In reviewing OCC's analysis, the Commission acknowledged that the size of such margin requirement increases was not necessarily commensurate with the risk of those Clearing Member's portfolios, and that imposing such a large, unexpected increase could impose a large, unexpected stress on a

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<sup>18</sup> The acronym "GARCH" refers to an econometric model that can be used to estimate volatility based on historical data.

<sup>19</sup> See Exchange Act Release No. 84879 (Dec. 20, 2018), 83 FR 67392, 67393 (Dec. 29, 2018) (SR-OCC-2018-014).

<sup>20</sup> In general, the implied volatility of an option is a measure of the expected future volatility of the option's underlying security at expiration, which is reflected in the current option premium in the market.



Clearing Member during a period of high volatility.<sup>21</sup> Since then, OCC has taken several measures to mitigate such procyclicality, including changes to its GARCH-based implied volatility model,<sup>22</sup> and a new model to replace GARCH for simulating implied volatility for SPX-based options and volatility index futures.<sup>23</sup> Even with such revisions, however, the GARCH model may produce procyclical margin results that are not commensurate with the risk of the products, portfolios, or markets that OCC seeks to manage.<sup>24</sup>

To mitigate such procyclicality, OCC also applies numerical constraints to certain statistical parameters that inform the model's reaction to market volatility. Specifically, the GARCH model uses statistical alpha ( $\alpha$ ),<sup>25</sup> beta ( $\beta$ ),<sup>26</sup> and gamma ( $\gamma$ )<sup>27</sup> parameters as part of its econometric model for updating risk factors to reflect the most recent market data. Those statistical parameters are calculated daily based on updated price data.<sup>28</sup> As described in OCC's STANS Methodology Description,<sup>29</sup> OCC applies numerical constraints (i.e., "control settings") to these GARCH parameters after their initial

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<sup>21</sup> See Exchange Act Release No. 84879, 83 FR at 67394.

<sup>22</sup> See *id.* at 67393.

<sup>23</sup> See Exchange Act Release No. 95319 (July 19, 2022), 87 FR 44167 (July 25, 2022) (SR-OCC-2022-001).

<sup>24</sup> See *supra* note 11 and accompanying text.

<sup>25</sup> Alpha is the weight attached to the contribution to the forecast variance from the price risk factor. Together with gamma, it controls the model's reaction to recent market moves.

<sup>26</sup> Beta is the weight attached to the contribution to the forecast variance from the previous day's forecast. As such, it concerns the persistence of volatility.

<sup>27</sup> Gamma is the additional weight attached to the contribution to the forecast variance from a negative return in the price risk factor. Together with alpha, it controls the model's reaction to recent market moves.

<sup>28</sup> See Exchange Act Release No. 83326 (May 18, 2018), 83 FR 25081 (May 31, 2018) (SR-OCC-2017-022); Exchange Act Release No. 83305 (May 23, 2018), 83 FR 24536 (May 29, 2018) (SR-OCC-2017-811).

<sup>29</sup> The STANS Methodology Description is intended to provide a comprehensive description of the material aspects of OCC's risk-based margin system. See Exchange Act Release No. 91079, 86 FR at 9410 (SR-OCC-2020-016).

calibration to mitigate the reactivity of the model volatility forecast, which is a primary driver of margin requirements for any equity or index.<sup>30</sup> These constraints apply to the calculation of margin for each Clearing Member.

OCC refers to the constraints applicable under normal market conditions as “regular” control settings. The STANS Methodology Description further provides that OCC maintains projections of various market conditions in which pre-determined constraints (i.e., a control set) are appropriate and that specification of those conditions and the control sets are based on continual quantitative research and may be specific to risk factor types (e.g., equities or volatility indexes). The STANS Methodology Description further provides that the assumptions and individual application of the parameter controls for risk factors and classes of risk factors are subject to periodic review and approval by OCC’s Model Risk Working Group (“MRWG”), a cross-functional group responsible for assisting OCC’s management in overseeing OCC’s model-related risk comprised of representatives from relevant OCC business units, including Quantitative Risk Management, Model Risk Management, and Corporate Risk Management. OCC refers to implementation of high volatility control settings to an individual risk factor as “idiosyncratic” control settings and implementation across all or a class of risk factors as “global” control settings.

OCC has implemented global settings on only a few occasions. For example, OCC implemented global control settings for equities, indexes, volatility-based products

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<sup>30</sup> See Exchange Act Release No. 85788 (Dec. 21, 2020), 85 FR 85788, 85793 (Dec. 29, 2020) (SR-OCC-2020-016) (“The STANS Methodology Description would also describe the controls that may be placed on the GJR-GARCH parameters after their initial calibration. GARCH volatility forecasting models can be very reactive in certain market environments. As a result, OCC may implement parameter controls for risk factors and classes of risk factors, which are subject to periodic review and approval by the MRWG.”).

and short ETF products from March 9, 2020 until April 9, 2020 in connection with the market volatility associated with the onset of the COVID-19 pandemic and on January 27, 2021 for volatility-based products in connection with market volatility caused by the so-called “meme stock” episode. On March 9, 2020, for example, when the SPX experienced a return of approximately -7.5%, coverage for SPX options under regular control settings would have increased from long coverage<sup>31</sup> of -11.77% and short coverage of 11.69% to -18.54% and 19.44%, respectively.<sup>32</sup> MRWG approved implementing global control settings based on a 50% weighting between regular and high volatility control settings, resulting in long and short coverage of -13.60% and 14.42%. These coverages were selected based on their alignment with the two-day short and long coverage determined from SPX implied volatility; -13% and 14%, respectively.<sup>33</sup> Aggregate margin requirements calculated using the global control settings were \$84.2 billion, compared to \$103.2 billion had OCC used regular control settings.<sup>34</sup>

OCC has implemented idiosyncratic control settings for individual risk factors more frequently.<sup>35</sup> For example, on April 28, 2023, FRM implemented idiosyncratic

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<sup>31</sup> In this context, the coverage rate for a security is the change in risk of the security express as a percentage of the price of the security when the market closes.

<sup>32</sup> OCC has included as confidential Exhibit 3A to File No SR-OCC-2024-001 responses to questions from OSC concerning drafts of this proposed rule change, including data concerning the coverage rates under control sets reviewed by the MRWG on March 9, 2020.

<sup>33</sup> OCC has also included as confidential Exhibit 3B to SR-OCC-2024-001 an internal OCC memorandum concerning high volatility control settings describing, among other things, how when implementing global control settings on March 9, 2020, the MRWG compared resulting coverages from different weightings against the coverage rates that could be derived through implied option volatility to evaluate of coverage rates under alternative parameters sets.

<sup>34</sup> OCC has included as confidential Exhibit 3C to SR-OCC-2024-001 responses to questions from Staff of the Commission’s Office of Clearance and Settlement (“OSC”) dated November 20, 2020 concerning OCC’s March 9, 2020 implementation of global control settings, including, among other things, as assessment of the impact on margin.

<sup>35</sup> From December 2019 to August 2023, for example, OCC implemented high volatility control settings lasting various durations (ranging from a single day to 190 days, with a median period of

control settings with respect to a risk factor for a security that experienced multi-day jumps in stock price,<sup>36</sup> including from \$6.72 to \$20 on April 27, 2023 and from \$20 to \$108.20 on April 28, 2023, which resulted in corresponding short coverage levels under regular control settings increasing from 98% to 5695%.<sup>37</sup> After implementing idiosyncratic control settings for that risk factor, aggregate margin requirements decreased \$2.6 billion. OCC did not observe any daily backtesting exceedances associated with implementing idiosyncratic control settings for this risk factor.

In general, OCC has not observed backtesting exceedances attributable to the implementation of global or idiosyncratic volatility control settings. Currently, OCC monitors margin sufficiency at the Clearing Member account level to identify backtesting exceedances. Account exceedances are investigated to determine the cause of the exceedance, including whether the exceedance can be attributed to the implementation of high volatility control settings. No account level exceedance has been attributed to the implementation of high volatility control settings. OCC also performs model backtesting on all risk factors with listed derivatives or stock loan positions, or securities pledged as collateral within Clearing Member accounts, including for risk factors subject to high volatility control settings. Model backtesting has not identified an issue with the adequacy of margin coverage associated with the implementation of idiosyncratic control settings. OCC also conducted instrument-level backtesting over a two-year time horizon on securities for which idiosyncratic control settings were implemented. Of the 14 out of

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10 days) for more than 200 individual risk factors. See Exhibit 3A, *supra* note 32 (providing a list of instances in which OCC implemented global and idiosyncratic control settings).

<sup>36</sup> While no options were listed on the security, certain Clearing Members maintained cleared stock loan positions and collateral deposits in that security.

<sup>37</sup> See Exhibit 3A, *supra* note 32 (providing responses concerning an April 28, 2023 implementation of idiosyncratic control settings).

244 securities for which 2-day expected shortfall coverages was less than 99%, OCC found that the coverages with regular control settings would not have been significantly different.<sup>38</sup> Only one risk factor had 2-day expected shortfall short coverage under 99% while on idiosyncratic control settings that would have been above 99% on regular control settings, driven by one additional 2-day expected shortfall short exceedance.<sup>39</sup> However, this single occurrence did not contribute to any Clearing Member account-level exceedance. Based on this study, OCC believes that application of high volatility control settings does not have a significant negative effect on the sufficiency of OCC's margin coverage.

### **Proposed Changes**

OCC proposes to amend its Margin Policy to add a new section<sup>40</sup> addressing control settings so that OCC's rules would include a sufficient level of detail about the high volatility control setting process currently maintained in other internal OCC procedures, including (1) how OCC sets and reviews the regular and high volatility control sets; (2) how OCC monitors for market volatility and idiosyncratic price moves and establishes thresholds to escalate the results of such monitoring for consideration of whether high volatility control settings are warranted; and (3) OCC's internal governance for implementing and terminating high volatility control settings.

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<sup>38</sup> See Exhibit 3A, supra note 32 (providing responses to requests for backtesting data and analysis).

<sup>39</sup> Id.

<sup>40</sup> This new section would be added to the "Margin Methodology" section of the Margin Policy and the subsections would be renumbered to reflect the addition.

(1) How OCC Sets and Reviews Regular and High Volatility Control Sets

First, OCC proposes to amend the Margin Policy to add a subsection under the new control settings section that would address how OCC reviews and sets the regular and high volatility control sets (i.e., the bounds applied to the GARCH parameters under regular and idiosyncratic control settings).<sup>41</sup> The Margin Policy would require that FRM conduct a review of the control sets on an at-least annual basis, and any recommended changes would require MRWG approval. With respect to the regular control set, the Margin Policy would further provide that such review would assess whether the GARCH parameter bounds are appropriately risk-based, including, but not limited to, assessing whether they align with the 95<sup>th</sup> percentile of the parameter calibrations over the prior review period. The Margin Policy would further provide that the review of the high volatility control set would assess whether the control settings effectively mitigate procyclicality while remaining appropriately risk-based, including, but not limited to, whether the bounds keep the day-over-day change in 2-day expected shortfall coverage within a factor of approximately 1.5 assuming price shocks based on observed returns for top risk factors.<sup>42</sup> These additions to the Margin Policy are intended to describe OCC's

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<sup>41</sup> The high volatility control value sets are sometimes referred to as idiosyncratic control settings because, in practice, the high volatility control set is what OCC applies when implementing idiosyncratic control settings. As discussed above, when implementing global control settings, MRWG evaluates and selects a control setting with different weightings between the regular control set and high volatility control set based on an assessment of which blended approach generates a coverage level that converges with the implied volatility of the SPX. See supra note 33 and accompanying text.

<sup>42</sup> The return shocks are maintained in and updated in accordance with model whitepapers that support the STANS Methodology Description. The current return shocks for index and volatility products are based on the largest observed downward and upward price moves, respectively. The current return shock for equities is a -15% return based on large observed negative returns for a sample of individual equities. OCC has included the model whitepaper as confidential Exhibit 3D to File No. SR-OCC-2024-001. The whitepaper is redlined with anticipated updates based on the most recent annual review of the high volatility control setting process and edits intended to capture feedback from OSC staff in connection with its review of a draft of this proposal.

current process and internal procedures for setting the regular and idiosyncratic control sets.<sup>43</sup>

(2) How OCC Monitors for and Escalates High Volatility to Appropriate Decisionmakers

OCC currently conducts daily monitoring for high market volatility and idiosyncratic price moves for individual securities against thresholds that, if breached, would require escalation to appropriate decisionmakers to evaluate the adequacy of and make adjustments to OCC's model parameters. Specifically, Pursuant to the Clearing Fund Methodology Policy and the procedures thereunder, OCC has established thresholds related to high market volatility, low market liquidity, and significant increases in position size or concentration that would trigger an intra-month meeting of the MRWG to review stress test results.<sup>44</sup> The underlying procedure refers to such thresholds as "CCA Monitoring Thresholds" because they are associated with SEC requirements for when a covered clearing agency must perform certain required monthly reviews on a more frequent basis.<sup>45</sup>

While these thresholds are set in accordance with the Clearing Fund Methodology Policy with respect to its stress testing procedures, OCC uses the same thresholds as triggers for review of its risk-based margin system, including (1) more frequent

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<sup>43</sup> OCC has included the periodic reviews presented to MRWG since 2020 in confidential Exhibit 3E to File No. SR-OCC-2024-001. OCC believes that such changes to the control sets would be reasonably and fairly implied by the Margin Policy, as proposed to be amended.

<sup>44</sup> See Exchange Act Release No. 83406 (June 11, 2018), 83 FR 83406 (June 15, 2018) (SR-OCC-2018-008) (describing how the Clearing Fund Methodology Policy "would require that OCC maintain procedures for determining whether, and in which circumstances" stress testing review must be completed more frequently than monthly "when the products cleared or markets served display high volatility," among other possible triggers).

<sup>45</sup> See 17 CFR 17Ad-22(e)(4)(iv)(C) (with respect to stress testing); 17Ad-22(e)(6)(vi)(C) (with respect the risk-based margin system); 17Ad-22(e)(7)(vi)(C) (with respect to liquidity resource sufficiency).

sensitivity analysis of its margin model and a review of OCC’s parameters and assumptions for backtesting, and (2) with respect to the high volatility threshold, escalation to the MRWG for consideration of whether to implement global control settings. However, unlike the Clearing Fund Methodology Policy, the Margin Policy does not currently reference how the thresholds are set. As proposed to be amended, the “Margin Monitoring” section of the Margin Policy would be amended to add a discussion of the CCA Monitoring Thresholds.<sup>46</sup> That section would refer to the CCA Monitoring Thresholds established under the Clearing Fund Methodology Policy and its underlying procedure. The Margin Policy would further provide that the CCA Monitoring Thresholds are reviewed annually by the MRWG and the Stress Testing Working Group (“STWG”) to ensure they remain adequate to identify periods of high market volatility,<sup>47</sup> low market liquidity, and significant increases in position size/concentration. The MRWG and STWG would be required to approve any changes to the thresholds.

To monitor for volatility experienced by individual risk factors that may merit implementing idiosyncratic control settings, the Margin Policy would require FRM to monitor securities against thresholds for idiosyncratic price moves that would be

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<sup>46</sup> The subsections in the “Margin Monitoring” section would be renumbered accordingly to reflect this addition.

<sup>47</sup> With respect to the high market volatility thresholds relevant to this filing, OCC’s current thresholds are based on a statistical 1-in-18 month return calculated daily from the previous 10 years of market data for the S&P 500 and VIX indexes. As of August 3, 2023, the thresholds translated to a 38.12% return for VIX and a -4.52% return for the SPX. Developmental evidence supporting the CCA Monitoring Threshold for high volatility has been provided in the model whitepaper. See Exhibit 3D, *supra* note 42. However, as discussed above, the CCA Monitoring Thresholds and the method for reviewing and updating them would be maintained in the procedures supporting the Clearing Fund Methodology Policy. As such, OCC believes the CCA Monitoring Thresholds for high volatility and updates thereto consistent with the Margin Policy would be reasonably and fairly implied by the Margin Policy.



established in its procedures (“Idiosyncratic Thresholds”).<sup>48</sup> The Idiosyncratic Thresholds may employ a tiered structure that takes into account the type and magnitude of OCC’s risk exposure to the security (e.g., whether it is an optionable security with open interest, accepted as collateral, and/or an Eligible Security under OCC’s Stock Loan Programs), the value of the security, the magnitude of the price move, and the coverage rates.<sup>49</sup> The Margin Policy would further reflect that on an at-least annual basis, FRM reviews whether the Idiosyncratic Thresholds, and the related instances when idiosyncratic control settings were applied during the review period, appropriately capture products experiencing high volatility. Any change to the Idiosyncratic Thresholds would require MRWG review and approval.

(3) How OCC Implements and Terminates High Volatility Control Settings

When the monitoring thresholds discussed above are breached, appropriate decisionmakers at OCC determine whether to implement idiosyncratic or global control settings. Specifically, for breaches of the CCA Monitoring Threshold for high volatility, the Margin Policy would require that FRM escalate the matter to the MRWG and make a recommendation as to whether global control settings should be applied to all risk factors

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<sup>48</sup> OCC has included a copy of these procedures as Exhibit 3F to File No. SR-OCC 2024-001, which are redlined with anticipated changes arising from feedback received from OSC staff in connection with a review of a draft of this proposed rule change.

<sup>49</sup> See id. Currently, FRM Staff reviews a daily report of projected coverages for selected risk factors (excluding securities that do not have listed options and are not eligible as either collateral or as part of OCC’s Stock Loan Programs) with an absolute value of simple return greater than 20% or, for securities under \$1 or are missing a current or prior days’ closing price, with an absolute value of log return greater than 100%. Securities meeting these thresholds are then filtered to identify those with more than \$100 million in prior day risk exposure and a greater-than 3 times day-over-day increase in coverage. In addition, the thresholds filter for those securities for which regular parameter short coverages is greater than 350%. With respect to securities without listed options, the short coverage threshold also requires that the prior day risk exposure be greater than \$10 million. As discussed below, the Idiosyncratic Thresholds would be maintained in procedures supporting the Margin Policy, reviewed at-least annually, and updated with MRWG approval. As such, OCC believes the Idiosyncratic Thresholds and updates thereto consistent with the Margin Policy would be reasonably and fairly implied by the Margin Policy.

or a class of risk factors. The Margin Policy would require MRWG approval to implement global control settings. In making that determination, the Margin Policy would describe how MRWG would review coverage rates under potential control settings generated by taking a weighting of the bounds for regular and high volatility control sets. The Margin Policy would further require that MRWG make this determination considering factors including, but not limited to, which blended control value sets generate coverage levels that converge with the implied volatility of the SPX.

The Margin Policy would also provide for how OCC would revert back to regular control settings after having implemented global control settings. Such reversion would also require MRWG approval. The Margin Policy would further provide that when making a determination that market volatility has decreased to a level where global control settings are no longer required, the MRWG would consider factors including, but not limited to, whether SPX coverage rates produced under regular control settings have converged with the initial coverage rates when global control settings were first implemented.

With respect to breaches of the Idiosyncratic Thresholds, the Margin Policy would provide that FRM maintains authority to implement idiosyncratic control settings for an individual risk factor. Implementation of such idiosyncratic high volatility control settings would require approval of an FRM Officer.<sup>50</sup> In practice, FRM applies the high volatility control set to a risk factor each time the Idiosyncratic Thresholds are breached. However, the FRM Officer would retain authority under the Margin Policy to maintain

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<sup>50</sup> Officers are identified in OCC's By-Laws. See OCC By-Law Art IV. In this context, an FRM officer would include any member of FRM appointed by the Chief Executive Officer or Chief Operating Officer, including a Managing Director, Executive Director or Executive Principal. See id. § 9.

regular control settings in the case of exceptional circumstances, including, for example, due to implementation of global control settings, operational issues such as production processing problems, or edge cases for which the FRM Officer determines that further refinement of the Idiosyncratic Thresholds is warranted. If the FRM Officer determines not to implement idiosyncratic control settings in edge cases, the Margin Policy would require that the FRM Officer present proposed changes to the Idiosyncratic Thresholds that reflect the exception within 30 days to the MRWG for review and, subject to MRWG discretion, approval. The Margin Policy would also provide for an FRM Officer's authority to approve idiosyncratic control settings based on additional considerations such as market moves, expected shortfall risk contribution, and changes in Clearing Member positions.<sup>51</sup>

Finally, the Margin Policy would provide for reversion from idiosyncratic control settings to regular control settings. Specifically, the Margin Policy would provide that generally, an FRM Officer will approve such reversion when the coverage rates under the regular control set converges with the initial coverage rate when idiosyncratic control settings were first implemented or when the coverage rates decline to or below the coverage rate under the Idiosyncratic Thresholds that triggered the idiosyncratic control

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<sup>51</sup> For example, an FRM Officer may use this authority to implement hypothetical scenarios for securities in cases where the securities fell just short of one element in the Idiosyncratic Thresholds' tiered structure, but where breaches of other elements weighed in favor of applying idiosyncratic control settings in the FRM Officer's judgment. See Exhibit 3A, *supra* note 32 (detailing an example in which an FRM Officer used this authority when a security was just below the \$100 million threshold for prior day risk exposure, but an FRM Officer approved implementing idiosyncratic control settings based on the significant day-over-day increase to short coverage combined with the size of the exposure).

settings.<sup>52</sup> However, to account for possible unforeseen and unanticipated situations, the Margin Policy would provide that idiosyncratic control settings may be applied for a longer or shorter period at the discretion of the FRM Officer.

(2) Statutory Basis

OCC believes that the proposed rule change is consistent with Section 17A of the Exchange Act<sup>53</sup> and the rules and regulations thereunder applicable to OCC. Section 17A(b)(3)(F) of the Act<sup>54</sup> requires, in part, that the rules of a clearing agency be designed to promote the prompt and accurate clearance and settlement of securities transactions, and in general, to protect investors and the public interest. The proposed changes are intended to codify OCC's process for adjusting parameters in STANS in response to broad market volatility or idiosyncratic price moves for individual securities. As discussed above, the GARCH model has been observed to overreact to changes in volatility.<sup>55</sup> Such sudden increases in margin requirements may stress certain Clearing Members' ability to obtain liquidity to meet those requirements, particularly in periods of high volatility, and could result in a Clearing Member being delayed in meeting, or ultimately failing to meet, its daily settlement obligations to OCC. A resulting suspension of a defaulting Clearing Member may result in losses chargeable to the mutualized Clearing Fund deposits of non-defaulting Clearing Members, which could result in unexpected costs for those Clearing Members. The proposed changes are

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<sup>52</sup> For example, under the current Idiosyncratic Control Settings, discussed above in note 49, an FRM Officer would approve reverting to regular control settings when the short coverage declines to 350% or below.

<sup>53</sup> See 15 U.S.C. 78q-1.

<sup>54</sup> 15 U.S.C. 78q-1(b)(3)(F).

<sup>55</sup> See supra notes 19-23, 34-35, and accompanying text.

intended to support the high volatility control settings process designed to mitigate the procyclicality of its GARCH model that may cause or exacerbate such financial instability. For these reasons, OCC believes the proposed changes to OCC’s rules would support processes reasonably designed to promote the prompt and accurate clearance and settlement of securities transactions, and in general, to protect investors and the public interest, in accordance with Section 17A(b)(3)(F) of the Act.<sup>56</sup>

OCC believes that the proposed changes are also consistent with SEC Rule 17Ad-22(e)(6), which requires, in part, that a covered clearing agency establish, implement, maintain and enforce written policies and procedures reasonably designed to cover 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.<sup>57</sup> Commission guidance with respect to SEC Rule 17Ad-22(e)(6) further provides that a covered clearing agency should consider whether its margin model, “to the extent practicable and prudent, limits the need for destabilizing, procyclical changes.”<sup>58</sup> As noted above, OCC’s GARCH model demonstrates sensitivity to sudden spikes in volatility, which can at times result in overreactive margin requirements that OCC believes are unreasonable and procyclical.<sup>59</sup> Based on its analysis,<sup>60</sup> OCC believes that the high volatility control settings reduce the oversensitivity of the variance forecasts for price risk factors while

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<sup>56</sup> Id.

<sup>57</sup> See 17 CFR 240.17Ad-22(e)(6)(i).

<sup>58</sup> Standards for Covered Clearing Agencies, Exchange Act Release No. 78961, 81 FR at 70819.

<sup>59</sup> See supra notes 19-21 and accompanying text.

<sup>60</sup> See supra notes 38-39 and accompanying text.

continuing to produce margin levels commensurate with the risks presented during periods of sudden, extreme volatility, consistent with Rule 17Ad-22(e)(6)(i).<sup>61</sup>

SEC Rule 17Ad-22(e)(6) further requires that a covered clearing agency's policies and procedures be reasonably designed to monitoring its risk-based margin system on an ongoing basis, including by conducting a review of its parameters during periods of time when the products cleared or markets served display high volatility, report the results to appropriate decisionmakers, and use the results to evaluate the adequacy of and adjust its model parameters.<sup>62</sup> The proposed changes to the Margin Policy would require that (i) FRM monitor for periods when the products cleared or markets served display high volatility; (ii) FRM escalate the results of its monitoring to appropriate decisionmakers; and (iii) FRM or MRWG may implement high volatility control settings to adjust the GARCH model parameters based on specified criteria. OCC believes that FRM and MRWG are the appropriate decisionmakers for making determinations about these margin parameter adjustments because they are composed of the subject matter experts most familiar with the performance of and risks associated with OCC's margin models. In addition, OCC believes it appropriate that implementation of global control settings require MRWG approval. MRWG is comprised of both first- and second-line personnel, including personnel in OCC's Model Risk Management business unit, who, under OCC's Risk Management Framework, are responsible for evaluating model parameters and assumptions and providing effective and independent challenge through OCC's model

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<sup>61</sup> 17 CFR 240.17Ad-22(e)(6)(i).

<sup>62</sup> 17 CFR 240.17Ad-22(e)(6)(vi).

lifecycle.<sup>63</sup> Accordingly, OCC believes that this cross-departmental group is the appropriate governing body for reviewing and approving such adjustments to OCC's model parameters during periods of high market volatility, consistent with Rules 17Ad-22(e)(6)(vi).<sup>64</sup>

In addition, OCC believes that proposed changes to promote aspects of the high volatility control setting process to OCC's rule-filed Margin Policy are consistent with Section 19(b) of the Exchange Act<sup>65</sup> and SEC Rule 19b-4<sup>66</sup> thereunder, which require a self-regulatory organization to file proposed rule changes with the Commission. In particular, SEC Rule 19b-4 provides that proposed rule changes subject to this filing requirement include stated policies, practices and interpretations of the self-regulatory organization, which the Commission defines to include, among other things, "any material aspect of the operation of the facilities of the self-regulatory organization,"<sup>67</sup> regardless of whether the stated policy, practice or interpretation is made generally available. SEC Rule 19b-4 provides certain exceptions to the filing requirement, including if the stated policy, practice or interpretation is "reasonably and fairly implied by an existing rule of the self-regulatory organization."<sup>68</sup> OCC's use of high volatility control settings is currently addressed in OCC's STANS Methodology Description, a rule

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<sup>63</sup> See Exchange Act Release No. 95842, 87 FR at 58413 (File No. SR-OCC-2022-010) (filing to establish OCC's Risk Management Framework). OCC Risk Management Framework is available on OCC's public website: <https://www.theocc.com/risk-management/risk-management-framework>.

<sup>64</sup> 17 CFR 240.17Ad-22(e)(6)(vi).

<sup>65</sup> 15 U.S.C. 78s(b).

<sup>66</sup> 17 CFR 240.19b-4.

<sup>67</sup> 17 CFR 240.19b-4(a)(6)(i).

<sup>68</sup> 17 CFR 240.19b-4(c)(1).

of OCC.<sup>69</sup> This proposed rule change would describe other aspects of the high volatility control setting process, including (1) how OCC establishes and maintains regular and high volatility control sets; (2) how OCC monitors for and escalates high market volatility and idiosyncratic price moves to appropriate decisionmakers for consideration of whether high volatility control settings are warranted; and (3) OCC’s internal governance for implementing and terminating high volatility control settings. OCC believes that promoting these aspects of the high volatility control setting process to the Margin Policy would ensure that its rules contain sufficient detail about material aspects of its margin system.

OCC further believes that other internal procedures and technical documents concerning the execution of the high volatility control settings would be reasonably and fairly implied by its rules, as amended—including the regular and high volatility control sets, the thresholds used to escalate price movements and market volatility to appropriate decisionmakers to consider implementing high volatility control settings, and the method for reviewing and updating those control sets and thresholds based on the latest market data.<sup>70</sup> Continuing to maintain these details in OCC internal procedures that are reasonably and fairly implied by OCC’s rules would allow OCC to adjust the high volatility control settings process in response to novel situations, changing market conditions and additional quantitative research as OCC’s processes mature. Accordingly, OCC believes that the proposed rule change is consistent with Section 19(b) of the Exchange Act<sup>71</sup> and the regulations thereunder.

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<sup>69</sup> See supra notes 29-30 and accompanying text.

<sup>70</sup> See supra notes 43, 47, and 49.

<sup>71</sup> 15 U.S.C. 78s(b).



For the above reasons, OCC believes that the proposed rule change is consistent with Section 17A of the Exchange Act<sup>72</sup> and the rules and regulations thereunder applicable to OCC.

(B) Clearing Agency's Statement on Burden on Competition

Section 17A(b)(3)(I) of the Exchange Act<sup>73</sup> requires that the rules of a clearing agency not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The proposed changes merely codify requirements related to the administration of OCC's high volatility control settings, which, when implemented, apply to all Clearing Members that hold cleared positions within the scope of the high volatility control settings. Accordingly, OCC does not believe that the proposed rule change would unfairly inhibit access to OCC's services.

While high volatility control settings implemented under the proposed changes may impact different accounts to a greater or lesser degree depending on the composition of positions in each account, OCC does not believe that such impacts would impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act. As discussed above, OCC is obligated under the Exchange Act and the regulations thereunder to review its model parameters during periods of time when the products cleared or markets served display high volatility, report the results to appropriate decisionmakers, and use the results to evaluate the adequacy of and adjust its model parameters.<sup>74</sup> As discussed above, OCC believes the proposed changes to its rules support a high volatility control setting process that is reasonably designed to monitor

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<sup>72</sup> 15 U.S.C. 78q-1.

<sup>73</sup> 15 U.S.C. 78q-1(b)(3)(I).

<sup>74</sup> See 17 CFR 240.17Ad-22(e)(6)(vi)(C)-(D).

volatility in the products and markets served by OCC and escalate the results of that monitoring to appropriate OCC decisionmakers, who would evaluate whether adjustments to OCC's model parameters through use of control settings is warranted. In addition, the changes would support a process designed to mitigate procyclicality observed with the GARCH model, which OCC believes would help ensure that its margin requirements remain commensurate with the risks presented by its Clearing Members' activity, consistent with SEC Rule 17Ad-22(e)(6)(i).<sup>75</sup> Accordingly, OCC believes that the proposed rule change would not impose any burden or impact on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act.

(C) Clearing Agency's Statement on Comments on the Proposed Rule Change Received from Members, Participants or Others

Written comments were not and are not intended to be solicited with respect to the proposed change and none have been received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the Federal Register or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

- (A) by order approve or disapprove such proposed rule change, or
- (B) institute proceedings to determine whether the proposed rule change should be disapproved.

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<sup>75</sup> 17 CFR 240.17Ad-22(e)(6)(i).

The proposal shall not take effect until all regulatory actions required with respect to the proposal are completed.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments:

- Use the Commission's internet comment form (<https://www.sec.gov/rules/sro.shtml>); or
- Send an email to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include file number SR-OCC-2024-001 on the subject line.

Paper Comments:

- Send paper comments in triplicate to Vanessa Countryman, Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090.

All submissions should refer to file number SR-OCC-2024-001. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (<https://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for

website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of OCC and on OCC's website at <https://www.theocc.com/Company-Information/Documents-and-Archives/By-Laws-and-Rules>.

Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection.

All submissions should refer to file number SR-OCC-2024-001 and should be submitted on or before [INSERT DATE 21 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>76</sup>

**Sherry R. Haywood,**  
*Assistant Secretary.*

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<sup>76</sup> 17 CFR 200.30-3(a)(12).