



October 6, 2021

VIA CFTC PORTAL

Christopher J. Kirkpatrick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

**Re: OCC Rule Certification to Update OCC's STANS Methodology Description
Concerning the Interest Rates Used for Options Pricing**

Dear Secretary Kirkpatrick:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended ("Act"), and Commodity Futures Trading Commission ("CFTC") Regulation 40.6, The Options Clearing Corporation ("OCC") submits this rule certification make clarifying changes to OCC's System for Theoretical Analysis and Numerical Simulation ("STANS") Methodology Description concerning the interest rates used for options pricing. The date of implementation of the rule is at least 10 business days following receipt of the rule filing by the CFTC or the date the proposed rule is approved by the Securities and Exchange Commission ("SEC") or otherwise becomes effective under the Securities Exchange Act of 1934 ("Exchange Act"). This proposed rule has been submitted to the SEC under the Exchange Act.¹

Amendments to OCC's STANS Methodology Description are included in Exhibit A. OCC has requested confidential treatment for Exhibit A. Material proposed to be added to the STANS Methodology Description is marked by underlining, and material proposed to be deleted is marked with strikethrough text. All terms with initial capitalization that are not otherwise defined herein have the same meaning as set forth in the OCC By-Laws and Rules.²

In conformity with the requirements of Regulation 40.6(a)(7), OCC states the following:

¹ See SEC File No. SR-OCC-2021-011.

² 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>.

Explanation and Analysis

Background

STANS is OCC's proprietary risk management system for calculating Clearing Member margin requirements.³ The STANS methodology utilizes large-scale Monte Carlo simulations to forecast price and volatility movements in determining a Clearing Member's margin requirement.⁴ STANS margin requirements are calculated at the portfolio level of Clearing Member accounts with positions in marginable securities and consists of an estimate of two primary components: a base component and a concentration/dependence stress test add-on component. The base component is an estimate of a 99% expected shortfall⁵ over a two-day time horizon. The concentration/dependence stress test add-on is obtained by considering increases in the expected margin shortfall for an account that would occur due to (i) market movements that are especially large and/or in which certain risk factors would exhibit perfect or zero correlations rather than correlations otherwise estimated using historical data or (ii) extreme and adverse idiosyncratic movements for individual risk factors to which the account is particularly exposed. OCC uses the STANS methodology to measure the exposure of portfolios of options and futures cleared by OCC and cash instruments in margin collateral.

In the STANS methodology, the interest rate discount curve is a critical input for OCC's pricing models. OCC's pricing models are developed using the Black-Scholes framework. OCC uses the interest rate curve, which is constructed from market instruments, along with dividends, implied borrow cost, and implied volatility to specify underlying price dynamics. OCC uses this data along with exchange listed option price data to calibrate the implied borrow cost and implied volatility parameters used in the option pricing models. STANS margins are computed using models to generate 10,000 scenarios on underlying price and implied volatility, and those price and implied volatility scenarios are used as inputs to the option pricing model (along with the interest rate curve) to re-price the options. The margin base component is then determined from the profit-and-loss distribution of the scenario prices.

OCC currently constructs the interest rate discount curve using instruments referencing the London Interbank Offered Rate ("LIBOR"). LIBOR is a key benchmark interest rate at which major global banks lend to one another in the international interbank market for short-term loans. LIBOR

³ See Exchange Act Release No. 91079 (Feb. 8, 2021), 86 FR 9410 (Feb. 12, 2021) (File No. SR-OCC-2020-016). OCC makes its STANS Methodology description available to Clearing Members. An overview of the STANS methodology is available at <https://www.theocc.com/Risk-Management/Margin-Methodology>.

⁴ See OCC Rule 601.

⁵ 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, generally speaking, is used in risk management to measure the potential risk of loss for a given set of assets over a particular time horizon.

is also commonly used by financial market participants more broadly to gauge prevailing interest rates; however, financial market participants are expected to largely transition away from the use of LIBOR by the end of 2021.⁶ Accordingly, OCC intends to transition to a new benchmark rate for constructing its interest rate curve to align with this industry transition.

The STANS Methodology Description currently provides a general description of OCC's method for constructing the interest rate discount curve but does not specify any particular benchmark rate.⁷ While the STANS Methodology Description is intended to provide flexibility in the benchmark rate used, the document contains certain details of the interest rate curve construction process that more closely reflect the use of LIBOR as the benchmark rate.

Proposed Changes

OCC proposes to revise its STANS Methodology Description to clean up certain details regarding the interest rate curve construction process. Section 3.2 of the STANS Methodology Description describes OCC's method for constructing the interest rate discount curve used to accurately price the options cleared by OCC. While the STANS Methodology Description does not specify the interest rate used in this process, the document contains certain details that more closely reflect the use of LIBOR as the benchmark rate. As noted above, the industry plans to transition away from using LIBOR as the benchmark for short-term interest rates by the end of 2021. OCC therefore proposes additional clarifying and clean up changes to the STANS Methodology Description so that the methodology more accurately reflects the potential use of different industry standard benchmark rates to construct the interest rate discount curve in STANS.

Compliance with the Act and Regulations Thereunder

OCC reviewed the DCO core principles ("Core Principles") as set forth in the Act, regulations thereunder, and the provisions applicable to a DCO that elects to be subject to the provisions of 17 CFR Subpart C ("Subpart C DCO"). During this review, OCC identified the following Core Principles, regulations and provisions applicable to Subpart C DCOs as potentially being impacted:

Risk management. OCC believes that implementing the proposed rule change will be aligned with the requirements of Core Principle D.⁸ Core Principle D requires, in part, that each DCO limit, through the use of margin and other risk control mechanisms, its potential losses from defaults by members and participants to ensure that its operations would not be disrupted and that its non-defaulting members or participants are not exposed to losses they cannot anticipate or control.⁹

⁶ See <https://www.sec.gov/news/public-statement/libor-transition>.

⁷ See *supra* note 3.

⁸ 7 U.S.C. 7a-1(c)(2)(D).

⁹ See 7 U.S.C. 7a-1(c)(2)(D)(iii).

Core Principle D further requires that each DCO have margin requirements sufficient to cover potential exposures in normal market conditions.¹⁰

As described above, the proposed rule change would clarify the STANS Methodology Description so that the methodology more accurately reflects the potential use of different industry standard benchmark rates to construct the interest rate discount curve in STANS. OCC therefore believes the proposed rule change would result in more accurate methodology documentation designed to: (i) result in margin requirements sufficient to cover potential exposures in normal market conditions and (ii) limit OCC's potential losses from defaults by members and participants to ensure that its operations would not be disrupted and that its non-defaulting members or participants are not exposed to losses they cannot anticipate or control. In this way, OCC believes the proposed rule change is consistent with the requirements with Core Principle D under the Act.¹¹

Opposing Views

No opposing views were expressed related to the rule amendments.

Notice of Pending Rule Certification

OCC hereby certifies that notice of this rule filing has been given to Clearing Members of OCC in compliance with Regulation 40.6(a)(2) by posting a copy of the proposed rule change on OCC's website concurrently with the filing of this submission.

¹⁰ See 7 U.S.C. 7a-1(c)(2)(D)(iv).

¹¹ 7 U.S.C. 7a-1(c)(2)(D).

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Certification

OCC hereby certifies that the rule set forth in Exhibit A of the enclosed complies with the Act and the CFTC's regulations thereunder.

Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Justin W. Byrne". The signature is written in a cursive style with a long horizontal stroke at the end.

Justin W. Byrne
Associate General Counsel

Enclosure(s)

Exhibit A

[Redacted Under CFTC Regulation 40.8]