DCO Rules

UNITED STATES
COMMODITY FUTURES TRADING COMMISSION

Submitter Information

Organization Name
Options Clearing Corporation

Organization Type	**Organization Acronym**
DCO	OCC
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Cover Sheet

Submission Number	**Submission Date**
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40.6(a) Rule Certification

Submission Description
OCC Rule Certification to Expand the Use of OCC's Synthetic Futures Model

☑ **Request Confidential Treatment**

Registered Entity Identifier Code

Rule Numbers
STANS Methodology Description

Date of Intended Implementation
5/17/2021

Documents

SR-OCC-2021-005 CFTC Letter 04.30.2021.pdf

SR-OCC-2021-005 CFTC Exhibit A 04.30.2021 [CONFIDENTIAL].pdf (Confidential Treatment Requested)

Request For Confidential Treatment - Detailed Written Justification

CFTC Confidentiality Request 04.30.2021.pdf

April 30, 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 Expand the Use of OCC's Synthetic Futures Model**

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 to expand the use of its Synthetic Futures Model. 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:

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[1]   See SEC File No. SR-OCC-2021-005.

[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

In 2019, OCC implemented a new model[3] for Volatility Index Futures.[4] The enhanced model included: (1) the daily re-estimation of prices and correlations using "synthetic" futures;[5] (2) an enhanced statistical distribution for modeling price returns for synthetic futures (i.e., an asymmetric Normal Reciprocal Inverse Gaussian (or "NRIG") distribution); and (3) a new anti-procyclical floor for variance estimates. The main feature of the enhanced model was the replacement of the use of the underlying index itself as a risk factor[6] (e.g., the VIX) with risk factors that are based on observed futures prices (i.e., the "synthetic" futures contracts). These risk factors are then used in the generation of Monte Carlo scenarios for the futures by using volatility and correlations obtained from the existing simulation models in OCC's propriety margin system, the System for Theoretical Analysis and Numerical Simulations ("STANS").[7] Additionally, the model has the ability to accommodate negative prices and interest rates.

On July 10, 2020, OCC submitted a rule change to expand the use of the model, currently known as the "Synthetic Futures Model," to Cboe's AMERIBOR Futures.[8] On September 30, 2020, OCC submitted another proposed rule change to further expand the use of the Synthetic Futures

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[3] See Securities Exchange Act Release No. 85870 (May 15, 2019), 84 FR 23096 (May 21, 2019) (SR-OCC-2019-801) and Securities Exchange Act Release No. 85873 (May 16, 2019), 84 FR 23620 (May 16, 2019) (SR-OCC-2019-002). This rule change was certified with the CFTC on May 14, 2019.

[4] Certain indices are designed to measure the volatility implied by the prices of options on a particular reference index or asset ("Volatility Indexes"). For example, the Cboe Volatility Index ("VIX") is designed to measure the 30-day expected volatility of the Standard & Poor's 500 index ("SPX"). OCC clears futures contracts on Volatility Indexes. These futures contracts are referred to herein as "Volatility Index Futures."

[5] A "synthetic" futures time series, for the intended purposes of OCC, relates to a uniform substitute for a time series of daily settlement prices for actual futures contracts, which persists over many expiration cycles and thus can be used as a basis for econometric analysis.

[6] A "risk factor" within OCC's margin system may be defined as a product or attribute whose historical data is used to estimate and simulate the risk for an associated product.

[7] See Securities Exchange Act Release No. 53322 (Feb. 15, 2006), 71 FR 9403 (Feb. 23, 2006) (SR-OCC-2004-20). A detailed description of the STANS methodology is available at http://optionsclearing.com/risk-management/margins/.

[8] See Securities Exchange Act Release No. 89392 (July 24, 2020), 85 FR 45938 (July 30, 2020) (SR-OCC-2020-007). This rule change was certified with the CFTC on July 24, 2020.

Model to Treasury yield index futures[9] listed by Small Exchange Inc. ("Small").[10] OCC now proposes to extend the use of the Synthetic Futures Model to certain other products planned to be listed by Small.

Proposed Changes

Small plans to launch new futures products linked to Light Sweet Crude Oil (WTI) ("Crude Oil Futures"). OCC proposes to extend the use of its Synthetic Futures Model to these Small Crude Oil Futures. The Synthetic Futures Model maps the price risk factor of a traded futures product to a synthetic time series constructed from the traded prices of similar tenor futures in history. This allows the model to capture differences in volatility of futures across the term structure. Such differences in volatility are exhibited for futures products whose underlying deliverable is linked to a different tenor of a market observable risk factor such as interest rates, volatility or commodity prices such as crude oil. As a result, OCC believes that the Synthetic Futures Model would provide more appropriate margin coverage for Small Crude Oil Futures than other models in OCC's inventory.[11]

OCC proposes to make minor modifications to the STANS Methodology Description to note that the STANS methodology generally, and Synthetic Futures Model specifically, would be used to generate margin requirements for Small Crude Oil Futures. Consistent with the existing STANS Methodology Description, OCC would use a fixed NRIG asymmetry parameter for Crude Oil Futures, which OCC believes is better suited to the risk profile of the product as the asymmetry of returns is primarily on the left-tail (or negative returns) and already captured by the GARCH model specifications. Consistent with the original implementation of the Synthetic Futures Model, the Small Crude Oil Futures will also use proportional returns in the calibration. OCC would initially use a fixed scale factor for purposes of determining the long-run variance floor until sufficient data for the Small Crude Oil Futures is available for this scale factor to be calibrated on a regular basis. The scale factor setting will be reviewed periodically based on the futures data and adjusted, if

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[9]   See Securities Exchange Act Release No. 90139 (Oct. 9, 2020), 85 FR 65886 (Oct. 16, 2020) (SR-OCC-2020-012). This rule change was certified with the CFTC on October 15, 2020.

[10]   On December 6, 2019, OCC submitted a rule change to execute an Agreement for Clearing and Settlement Services between OCC and Small in connection with Small's intention to operate as a designated contract market regulated by the CFTC. See Securities Exchange Act Release No. 87774 (Dec. 17, 2019), 84 FR 70602 (Dec. 23, 2019) (SR-OCC-2019-011). This rule change was certified with the CFTC on December 20, 2019.

[11]   For example, OCC also maintains a "Generic Futures Model," which is a simple model based on the cost of carry that is primarily used to margin equity-like futures such as SPX futures and can be used to model certain interest rates futures. This model has certain limitations (e.g., the model cannot currently accommodate negative prices and rates).

appropriate. Finally, the model will use market prices of futures after the product launch and use proxy data.[12] for historical dates prior to product launch to support the model calibration.

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.[13] 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 of the DCO 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.[14] Core Principle D further requires that each DCO have margin requirements sufficient to cover potential exposures in normal market conditions and that such margin requirements be set using risk-based models and parameters.[15]

As described above, the proposed rule change would allow OCC to use the Synthetic Futures Model to generate margin requirements for Small Crude Oil Futures. OCC believes the Synthetic Futures Model may provide better margin coverage for these products than other margin models maintained by OCC. OCC believes the proposed rule change is therefore designed to ensure that OCC sets margin requirements that would serve to limit its exposures to potential losses from defaults by its participants under normal market conditions so that the operations of OCC would not be disrupted, and non-defaulting participants would not be exposed to losses that they cannot anticipate or control. Moreover, OCC believes the proposed change would allow OCC to use risk-based models and parameters that are reasonably designed to consider and produce margin levels commensurate with the risks and particular attributes of Small Crude Oil Futures. In this way, OCC believes the proposed change promotes compliance with Core Principle D under the Act.[16]

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[12]   The proxy data for Small Crude Oil futures will be constructed from similar tenor ICE WTI futures.

[13]   7 U.S.C. 7a-1(c)(2)(D).

[14]   7 U.S.C. 7a-1(c)(2)(D)(iii).

[15]   7 U.S.C. 7a-1(c)(2)(D)(iv) - (v). CFTC Regulation 39.13(g)(2)(i) further implements Core Principle D by requiring that each DCO establish initial margin requirements that are commensurate with the risks of each product and portfolio, including any unusual characteristics of, or risks associated with, particular products or portfolios. 17 CFR 39.13(g)(2)(i).

[16]   7 U.S.C. 7a-1(c)(2)(D).

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.

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,

Justin W. Byrne
Associate General Counsel

Enclosure(s)

Exhibit A

[Redacted Under CFTC Regulation 40.8]