OCC THE FOUNDATION FOR SECURE MARKETS

#45448

TO: ALL CLEARING MEMBERS AND EXCHANGES

DATE: AUGUST 5, 2019

SUBJECT: OPTION PRICING MODELING ENHANCEMENTS

OCC is performing several enhancements to its implied volatility smoothing algorithm and vanilla option pricing model. OCC has filed for regulatory approval and is planning for a September 15, 2019 implementation that will be reflected in OCC clearing margin and Risk Based Haircut / Customer Portfolio Margin ("RBH/CPM") theoreticals for settlement date September 17, 2019. If all regulatory approvals are not received by September 15, 2019, or if the target implementation is modified for any other reason, OCC will announce a new implementation date via information memorandum. The proposed rule change can be located at https://www.sec.gov/rules/sro/occ/2019/34-86296.pdf.

OCC utilizes the implied volatility smoothing algorithm and vanilla option pricing model to determine option prices and corresponding option Greeks (e.g., Delta) used as inputs to downstream margin calculations and to generate RBH/CPM theoreticals. As part of these enhancements, smoothing output and the vanilla option pricing model will more consistently uphold put-call parity and enforce arbitrage-free option pricing. Backtesting results and testing performed to date generally yielded a modest decline in aggregate margin requirements. Each Clearing Member Organization will independently observe different levels of impact based on the cleared portfolios, but generally the size of change is within the daily fluctuations observed by OCC in the normal course of business.

OCC will produce forecasted margin requirements corresponding to the aforementioned enhancements beginning August 12, 2019 and until the implementation date. These pro forma results can be accessed in the Training External ENCORE environment as follows:

- Select the 'MyOCC Training' link for the Alt Environments tab to access the Training MyOCC page. 'Training' will be displayed at the top of this page.
- Select the 'Launch ENCORE' button from the upper right hand area of the page. 'OCC / ENCORE / train' will be displayed at the top of the External ENCORE window that opens.

Users encountering issues with, or lack of, ENCORE access should contact Member Services at (800) 621-6072.

The Training External ENCORE environment makes available the following reports for user review. When accessing reports related to this parallel testing, please identify the 'DRGFR00' tag in the lower left hand corner of each report. Other tags are applicable to different parallel testing initiatives.

- **Daily Margin Reconciliation** – reports daily margin requirement at OCC
- **Daily Margin Summary** and **Daily Margin Detail** – two separate reports that provide risk factor and position data, respectively, included in the Daily Margin Reconciliation margin requirement
- **Margin Memo – Collateral Reconciliation** – reports margin requirement at OCC excluding valued security and certain government security collateral deposits
- **Margin Memo – Collateral, Stock Loan & Repo Reconciliation** – reports margin requirement for broker-dealers members used in the SEA 15c3-3 Customer Reserve computation
- **Add On Charge Summary Report –** reports the breakdown of Add On charges displayed in the aggregate on the Daily Margin Reconciliation Report
- Other reports include – **Stock Loan Memo Margin Reconciliation**, **Collateral in Margins Memo**, and **Customer Gross Margin Summary**.

RBH/CPM theoretical output files and OFRA files will also be made available daily until implementation to all current subscribers to these files. Because these model enhancements will directly impact Customers' margin requirements, market-maker haircuts, and/or capital computations, OCC encourages firms to process these test files daily and to provide impact assessment results to clients. Requests for test files can be submitted to OCC's Technical Certification Services team through https://www.theocc.com/webapps/cert-test-services and referencing "RBH/CPM and OFRA sample files."

If you have any questions regarding this memo, please contact your Credit Risk Analyst. Clearing Members may also e-mail creditriskanalysts@theocc.com.