

January 23, 2018

VIA ELECTRONIC MAIL

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

Re: Rule Filing SR-OCC-2017-011 Rule Certification

Dear Secretary Kirkpatrick:

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Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended ("Act"), and Commodity Futures Trading Commission ("CFTC") Regulation 40.6, enclosed is a copy of the above-referenced rule filing submitted by The Options Clearing Corporation ("OCC"). OCC intends to formalize its Model Risk Management Policy no sooner than 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 rule filing has been submitted to the SEC under the Exchange Act.

OCC has requested confidential treatment for Exhibit 5 to SR-OCC-2017-011, the Model Risk Management Policy, contained in pages 42-48 of the enclosed filing.

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

Explanation and Analysis

The proposed change by OCC would formalize and update OCC's Model Risk Management Policy ("MRM Policy" or "Policy"), which sets forth the general framework for OCC's model risk management practices. The MRM Policy is included as confidential Exhibit 5 of the filing. The policy is being submitted without marking to improve readability as it is being submitted in its entirety as new rule text.

The proposed rule change does not require any changes to the text of OCC's By-Laws or Rules. 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.¹

THE FOUNDATION FOR SECURE MARKETS

OCC's By-Laws and Rules can be found on OCC's public website: <u>http://optionsclearing.com/about/publications/bylaws.jsp</u>.

Background

OCC's use of models inherently exposes OCC to model risk.² To help manage this risk, OCC is proposing to formalize and update its MRM Policy, which sets forth the general framework for OCC's model risk management practices. The MRM Policy would apply to all Risk Models³ used by OCC to determine, quantify or measure actual or potential risk exposures or risk mitigating actions. The purpose of the MRM Policy is to ensure that OCC appropriately manages its model risks by clearly outlining the roles and responsibilities of OCC's (1) Quantitative Risk Management department ("QRM"), (2) Model Validation Group ("MVG"), and (3) Model Risk Working Group ("MRWG") in model development, implementation, use, monitoring, and validation. The provisions of the MRM Policy addressing these core elements are described in greater detail below and are designed to ensure that OCC uses an appropriate approach to managing model risk. OCC notes that the MRM Policy is part of a broader framework regarding model risk management that is designed to further the appropriate design, validation and operation of OCC's Risk Models.⁴

Model Risk Management Policy

Introduction

The MRM Policy would apply to all Risk Models used by OCC to determine, quantify or measure actual or potential risk exposures or risk mitigating actions. As noted above, Risk Models are defined under the Policy to be credit risk models (e.g., models concerning OCC's Clearing Fund), margin system and related models (e.g., OCC's System for Theoretical Analysis and Numerical Simulations or "STANS"), and liquidity risk models.

The MRM Policy also would clarify that OCC considers a Risk Model to be any quantitative method or approach that applies statistical, economic, financial, or mathematical theories, techniques, and/or assumptions to process inputs into quantitative estimates, forecasts,

² Under the proposed Policy, "Model Risk" would be defined as the potential for adverse consequences from decisions based on incorrect or misused model outputs.

³ Under the proposed Policy, "Risk Models" would be defined as any quantitative method or approach that applies statistical, economic, financial, or mathematical theories, techniques, and/or assumptions to process inputs into quantitative estimates, forecasts, or projections. A Risk Model may also be a quantitative method with inputs that are qualitative or based on business judgment. Under the Policy, the term Risk Models would be used specifically in the context of credit risk models, margin system and related models, and liquidity risk models.

⁴ For example, OCC's Margin Policy is also part of OCC's framework regarding model risk management. OCC recently filed a proposed rule change with the SEC concerning the formalizing and updating of its Margin Policy, which is currently pending SEC review. <u>See</u> Securities Exchange Act Release No. 82355 (December 19, 2017), 82 FR 61060 (December 26, 2017) (SR-OCC-2017-007). OCC also submitted its Margin Policy to the CFTC for certification under Rule 40.6 on January 11, 2018.

or projections. A Risk Model can also be a quantitative method with inputs that are qualitative or based on business judgment.⁵ The MRM Policy also would define "Methodology" to mean a collection of Risk Models used to estimate financial risk exposures.

To guide activities in this part of OCC's model risk framework, OCC shall primarily follow the *Supervisory Guidance on Model Risk Management* issued by the Board of Governors of the Federal Reserve System and the Office of the Comptroller of the Currency (April 4, 2011), as well as any applicable regulatory requirements.⁶

The MRM Policy sets forth a governance structure for the allocation of roles and responsibilities for Risk Model development, implementation, use, monitoring, and validation among different groups and individuals, including OCC's Board, the Risk Committee of the Board ("Risk Committee"), management, and other OCC staff. These roles and responsibilities are described in further detail below.

Quantitative Risk Management

Under the proposed Policy, the Executive Vice President of OCC's Financial Risk Management department ("EVP-FRM") would be responsible for (i) having staff with the requisite knowledge, skills, and expertise to perform model risk management activities necessary to the staffs' responsibilities and (ii) overseeing Risk Model development, implementation, monitoring, and use.

Risk Model Development

Under the proposed Policy, Risk Model development and implementation shall be conducted by QRM unless a third-party is otherwise engaged by QRM to develop a Risk Model. Where QRM does not develop a Risk Model, it shall oversee the development, implementation, and monitoring in accordance with the Risk Model Development Procedure.

The design, theory, and logic of each Risk Model used by OCC shall be described in a document maintained by QRM and shall take into consideration published literature and industry best practice, where it is available. The document shall include a description of the Risk Model, the intended purpose of the Risk Model, the motivation of the Risk Model assumptions, the test data supporting the Risk Model, the Risk Model limitations, and other details as outlined in OCC's Maintenance and Periodic Review of Methodology Procedure. QRM also would be responsible for describing each Risk Model Methodology in a Methodology document. Requirements for Methodology documentation shall be contained in the Maintenance and

⁵ <u>See SR Letter 11-7, "Guidance on Model Risk Management," Board of Governors of the Federal Reserve System (April 4, 2011), and OCC Bulletin 2011-12, "Sound Practices for Model Risk Management," The Office of the Comptroller of the Currency (April 4, 2011).</u>

⁶ <u>Id.</u>

Periodic Review of Methodology Procedure. The EVP-FRM also shall review and, if appropriate, approve the Risk Model documentation. The EVP-FRM may delegate the responsibility for reviewing and approving such Risk Model documentation to the First Vice President, Quantitative Risk Management, who shall provide notice of any approval to the EVP-FRM.

Risk Model Implementation

Under the proposed MRM Policy, QRM would review, evaluate, and propose model changes (to include Model Defects,⁷ enhancements, and/or Decommissioning⁸ of a Risk Model) in accordance with the Model Implementation Procedure and OCC's Legal Services Policy (and related procedures). New products that are non-standard equity options/futures shall be reviewed by QRM according to the Model Implementation Procedure for determination as to whether or not a new Risk Model is required or if the use of an existing Risk Model is fit for purpose. QRM shall recommend approval to OCC's MRWG⁹ in accordance with the Model Risk Working Group Procedure subsequent to effective challenge and approval by MVG.

Under the Policy, QRM shall seek Legal department ("Legal") review to determine if a new Risk Model or change to an existing Risk Model requires regulatory filing prior to implementation and use in accordance with OCC's Legal Services Policy and related procedures. OCC shall not implement or use such Risk Model until Legal provides a written notice to QRM and MVG that the Risk Model does not require any additional regulatory action prior to implementation and use or, if a regulatory filing is required, that all requisite filing and approvals are complete.

Under the proposed Policy, QRM shall implement new Risk Models and changes to existing Risk Models in accordance with the Risk Model Development Procedure and the Model Implementation Procedure. QRM shall be responsible for overseeing the quality assurance and related testing procedures required for implementation and/or Decommissioning of a Risk Model. Reporting and escalation to the MRWG shall be performed in accordance with the Model Risk Working Group Procedure. The MRWG shall review and, if appropriate, approve

⁷ Under the proposed Policy, "Risk Model Defect" would be defined as an error, flaw, failure, or fault in a computer program or system that causes a Risk Model to produce an incorrect or unexpected result, or to behave in unintended ways.

⁸ Under the proposed Policy, a "Decommissioned Model" would be defined as a Risk Model that has been approved by the Risk Committee to no longer be used to estimate margin or Clearing Fund exposures.

⁹ The MRWG is responsible for assisting OCC's Management Committee in overseeing and governing OCC's model-related risk issues and consists of representatives from Financial Risk Management, QRM, MVG and Enterprise Risk Management.

all new Risk Models, Material Changes¹⁰ to Risk Models, and proposals for Decommissioning Risk Models prior to submitting to the Management Committee for approval.

Under the Policy, the Management Committee would be responsible for reviewing and approving each new Risk Model and each Material Change to a Risk Model prior to implementation and use. The Management Committee also would review and approve each proposal for Decommissioning a Risk Model. Each approval shall constitute a recommendation and be reported to the Risk Committee for further review and approval. The Risk Committee shall review and, if appropriate, approve each new Risk Model and each Material Change prior to implementation and use, except that Material Changes to OCC's margin and Clearing Fund methodologies shall be referred to the Board for review and, if appropriate, final approval, upon a recommendation from the Risk Committee. The Risk Committee also shall review and, if appropriate, approve the Decommissioning of a Risk Model prior to removing it from the Model Inventory.¹¹

Risk Model Monitoring

Pursuant to the proposed Policy, QRM shall monitor the use and performance of Risk Models according to the Model Backtesting Procedure, the Business Backtesting Procedure, and the Margin Model Parameter Review and Sensitivity Analysis Procedure. Monitoring shall be reasonably designed to determine if the Risk Model is accurate, reliable and robust, and to identify limitations. The results of monitoring also shall be used to evaluate the behavior of a Risk Model over a range of input values. Risk tolerance and associated key risk indicators would be maintained by QRM to measure and monitor model risk. These risk measures, in addition to monthly Risk Model parameter reviews shall be reported to the MRWG and escalated to the Management Committee and/or Risk Committee as necessary in accordance with the Model Risk Working Group Procedure.

Model Validation Group

Under the proposed Policy, the First Vice President of MVG shall have qualified staff with the requisite knowledge, skills, and expertise to perform validations in accordance with the Model Validation Procedure. MVG personnel responsible for validation shall be independent from, shall not report to, and shall otherwise be free from influence from OCC business areas involved in the development, implementation and operation of such Risk Models.

¹⁰ Under the proposed Policy, "Material Change" would be defined as a change to a Risk Model that, as deemed by the MRWG, requires Risk Committee approval due to its anticipated effect on margin or Clearing Fund requirements, impact to Clearing Members, volume or open interest, backtesting performance, etc. Material Changes may be quantitative or qualitative in nature and take into account the likelihood, impact, and context of the change relative to Risk Model.

¹¹ Under the proposed Policy, "Model Inventory" would be defined as OCC's database of in-use Risk Models and Methodologies.

Annual Model Validation Plan

The First Vice President of MVG shall develop and maintain an Annual Model Validation Plan ("Annual Plan"). The Annual Plan, as defined in the Annual Model Validation Plan Procedure, is a schedule of Risk Model validations performed for all Risk Models on the Model Inventory. MVG's Annual Plan shall require all Risk Models on the Model Inventory to be validated no less than annually (where annually is defined as 12 months, or 365 days).

Pursuant to the proposed Policy, the Risk Committee shall review and approve the Annual Model Validation Plan and any removals or deferrals from the previously approved Annual Model Validation Plan based on recommendations from the Chief Risk Officer ("CRO"). In addition, the CRO shall provide a quarterly report to the Risk Committee that provides information on progress against the Annual Model Validation Plan.

Model Inventory

Pursuant to the proposed Policy, MVG shall maintain a complete and accurate inventory of Risk Models according to the Model Inventory Procedure. To ensure the Model Inventory is complete and accurate, MVG shall perform a firm-wide assessment on an annual basis in accordance with the Model Identification Procedure.

Independent Model Validation

Under the proposed Policy, MVG would be responsible for evaluating the performance of each Risk Model by performing Independent Model Validations¹² in accordance with the Model Validation Procedure. Validations shall be performed according to the Model Validation Procedure, and shall include a review of Risk Model performance, parameters, and assumptions. Conclusions shall be formulated in the form of a "Model Assessment Report" and shall be reviewed by QRM upon conclusion of the report. MVG shall perform performance monitoring of Risk Models according to the Model Performance Monitoring Procedure. Findings from validations and performance monitoring shall be identified, monitored, remediated, and reported according to the Model Findings Management Procedure and presented to the Management Committee and Risk Committee in the form of a Model Risk Management Findings Dashboard.

Pursuant to the proposed Policy, MVG shall validate all Risks Models prior to implementation and use in accordance with the Model Validation Procedure. Additionally, MVG shall review Material Changes to Risk Models prior to implementation of the Material Change and in accordance with the Model Implementation Procedure. MVG shall assign a model rating and model risk level to each Risk Model on the Model Inventory. The effectiveness of each Risk Model shall be reported by the CRO to the Risk Committee on a

¹² Under the proposed Policy, "Independent Model Validation" would be defined as the evaluation of the performance of a Risk Model performed by a qualified person who is free from influence from the persons responsible for the development or operation of the models being validated.

quarterly basis.

In the event a third-party validator is used to validate a Risk Model or in the event that OCC uses a third-party to develop a Risk Model, MVG shall oversee/perform the validation in accordance with the Model Validation Procedure. The CRO shall report results of third party validations of OCC's Risk Models and results of validations of third-party Risk Models to the Management Committee and Risk Committee along with any recommended actions and remediation plans associated with such validations.

Model Risk Working Group

Under the proposed Policy, the MRWG would be responsible for assisting OCC's Management Committee in overseeing and governing OCC's model-related risk issues. The MRWG consists of representatives from Financial Risk Management, QRM, MVG and Enterprise Risk Management as well as representatives from Legal to provide adequate support and Legal expertise as it relates to Model Risk. The MRWG shall serve as a resource by overseeing model risk, which includes, without limitation, ongoing model risk monitoring activities, approving, or recommending approval of new Risk Models and Material Changes to Risk Models, and tracking Model Defects and remediation activities as stipulated in the Model Risk Working Group Procedure.

Policy Updates, Exceptions and Violations

Finally, pursuant to the proposed Policy, OCC's Management Committee shall review and approve the Policy on an annual basis and recommend approval of the Policy to the Risk Committee. The Management Committee also shall review and approve any material changes to the Policy and recommend further approval to the Risk Committee.

The MRM Policy also would contain OCC's standard policy language concerning the policy exception and violation processes. Specifically, any request for an exception to the Policy must be made in writing to a member of the Office of the Executive Chairman,¹³ who is then responsible for reviewing the exception request and providing a decision in writing to the person requesting the exception. OCC's CRO, Chief Compliance Officer, or Chief Audit Executive may also request an exception to the Policy directly to the Board. All requests for exceptions and their dispositions would be reported to the Board or Risk Committee as appropriate no later than its next regularly scheduled meeting, in a format approved by the Chair of the Board or Risk Committee. In addition, Policy violations shall be reported to OCC's Chief Compliance Officer, or, if the violation involves the Compliance Department, to the head of Internal Audit or a member of the Office of the Executive Chairman.

¹³ OCC's Office of the Executive Chairman currently consists of the Executive Chairman and Chief Executive Officer, President and Chief Operating Officer, and Chief Administrative Officer.

OCC reviewed the derivatives clearing organization ("DCO") core principles ("Core Principles") as set forth in the Act. During this review, OCC identified the following Core Principles as potentially being impacted:

Risk Management. OCC believes that implementing the proposed rule change will be consistent with the Core Principle D, which generally requires that a DCO possesses the ability to manage the risks associated with discharging its responsibilities through the use of appropriate tools and procedures.¹⁴ Rule 39.13(g) generally requires that each model and parameter used in setting initial margin requirements be risk-based and reviewed on a regular basis.¹⁵ Rule 39.13(g)(3) further implements Core Principle D by requiring that a DCO's systems for generating initial margin requirements, including its theoretical models, must be reviewed and validated by a qualified and independent party, on a regular basis.¹⁶ The proposed MRM Policy would provide for clear identification of OCC's risk-based models, including those risk-based models and parameters used to set margin requirements, and the regular monitoring and review of those models and parameters. In addition, the MRM Policy would require OCC to perform an Independent Model Validation of its Risk Models on at least an annual basis, or more frequently as needed, and prior to the implementation of new Risk Models or Material Changes to Risk Models. Moreover, as noted above, the proposed MRM Policy provides that OCC's model validation staff reviews each Risk Model in OCC's inventory, including margin models, at least annually and that such staff be removed from the primary development path of a model to preserve its ability to provide an independent assessment.

In this regard, the proposed changes would further OCC's compliance with Core Principle 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 be given to Clearing Members of OCC in compliance with Regulation 40.6(a)(2) by posting a copy of the submission on OCC's website concurrently with the filing of this submission.

¹⁴ 7 U.S.C. 7a-1(c)(2)(D).

¹⁵ 17 C.F.R. 39.13(g).

¹⁶ Such qualified and independent parties may be independent contractors or employees of the DCO, but shall not be persons responsible for development or operation of the systems and models being tested. <u>See</u> 17 C.F.R. 39.13(g)(3).

Certification

OCC hereby certifies that the rule set forth at Item 1 of the enclosed filing 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,

Jurw By

Justin W. Byrne Vice President, Regulatory Filings

Enclosure

						OMB APPROVAL		
Required	OMB Number: 3235-0045 Estimated average burden hours per response							
Page 1 c	of * 48	WASHING	EXCHANGE COMMISSI TON, D.C. 20549 orm 19b-4		File No. adment No. (req. for	* SR - 2017 - * 011 Amendments *)		
Filing by Options Clearing Corporation								
Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934								
Initial '	Amendment *	Withdrawal	Section 19(b)(2) *	Sectio	on 19(b)(3)(A) * Rule	Section 19(b)(3)(B) *		
Pilot	Extension of Time Period for Commission Action *	Date Expires *	 I9b-4(f)(1) I9b-4(f)(4) I9b-4(f)(2) I9b-4(f)(5) I9b-4(f)(3) I9b-4(f)(6) 					
Notice	of proposed change pursuant t	o the Payment, Cleari	ng, and Settlement Act of a	2010		ap Submission pursuant		
Section	n 806(e)(1) *	Section 806(e)(2) *			to the Securities Ex Section 3C(b)(•		
Exhibit 2 Sent As Paper Document Exhibit 3 Sent As Paper Document								
Description								
Provide a brief description of the action (limit 250 characters, required when Initial is checked *).								
Propos	sed rule change related to Th	e Options Clearing C	orporation's Model Risk	Manage	ement Policy.			
Contact Information								
Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.								
Firet N	lame * Justin		Last Name * Byrne					
Title *	Vice President, Regul	atory Filings						
E-mail	E-mail * jbyrne@theocc.com							
Teleph	none * (202) 971-7238	Fax (312) 322-6280						
Signature								
Pursuant to the requirements of the Securities Exchange Act of 1934,								
has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized. (Title *)								
Date	12/28/2017		Vice President, Regulato	-	15			
By	Justin W. Byrne			,e				
•	(Name *)		1					
NOTE: Clicking the button at right will digitally sign and lock this form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.								

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549					
For complete Form 19b-4 instructions please refer to the EFFS website.					
Form 19b-4 Information * Add Remove View	The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act. The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Register date, and corresponding file number, release date, Federal Register Getaral Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO] -xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)				
Exhibit 1 - Notice of Proposed Rule Change * Add Remove View					
Exhibit 1A- Notice of Proposed Rule Change, Security-Based Swap Submission, or Advance Notice by Clearing Agencies * Add Remove View	The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO] -xx-xx). A material failure to comply with these guidelines will result in the proposed rule change, security-based swap submission, or advance notice being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)				
Exhibit 2 - Notices, Written Comments, Transcripts, Other Communications Add Remove View Exhibit Sent As Paper Document	Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.				
Exhibit 3 - Form, Report, or Questionnaire Add Remove View Exhibit Sent As Paper Document	Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.				
Exhibit 4 - Marked CopiesAddRemoveView	The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.				
Add Remove View	The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change.				
Partial Amendment Add Remove View	If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.				

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SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

Form 19b-4

Proposed Rule Change by

THE OPTIONS CLEARING CORPORATION

Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

Item 1. <u>Text of the Proposed Rule Change</u>

This proposed rule change by The Options Clearing Corporation ("OCC") would formalize and update OCC's Model Risk Management Policy ("MRM Policy" or "Policy") in connection with multiple requirements applicable to OCC under Rule 17Ad-22, including Rules 17Ad-22(b)(2) concerning margin requirements and (b)(4) concerning model validation as well as Rules 17Ad-22(e)(2) concerning governance, (e)(3) concerning frameworks for the comprehensive management of risks, and (e)(4)(vii), (e)(6)(vii) and (e)(7)(vii) concerning model validation.¹ The MRM Policy is included as confidential Exhibit 5. The Policy is being is submitted without marking to improve readability as it is being submitted in its entirety as new rule text.

The proposed rule change does not require any changes to the text of OCC's By-Laws or Rules. 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

Item 2. Procedures of the Self-Regulatory Organization

The proposed rule change was approved for filing with the Commission by OCC's Board of Directors ("Board") at a meeting held on February 24, 2017.

Questions should be addressed to Justin Byrne, Vice President, Regulatory Filings, at (202) 971-7238.

¹ 17 CFR 240.17Ad-22(b)(2), (b)(4), (e)(2) - (4), and (e)(6) - (7).

² OCC's By-Laws and Rules can be found on OCC's public website: <u>http://optionsclearing.com/about/publications/bylaws.jsp</u>.

Item 3.Self-Regulatory Organization's Statement of the Purpose of, and Statutory
Basis for, the Proposed Rule Change

A. <u>Purpose</u>

Background

OCC's use of models inherently exposes OCC to model risk.³ To help manage this risk, OCC is proposing to formalize and update its MRM Policy, which sets forth the general framework for OCC's model risk management practices. The MRM Policy would apply to all Risk Models⁴ used by OCC to determine, quantify or measure actual or potential risk exposures or risk mitigating actions. The purpose of the MRM Policy is to ensure that OCC appropriately manages its model risks by clearly outlining the roles and responsibilities of OCC's (1) Quantitative Risk Management department ("QRM"), (2) Model Validation Group ("MVG"), and (3) Model Risk Working Group ("MRWG") in model development, implementation, use, monitoring, and validation. The provisions of the MRM Policy addressing these core elements are described in greater detail below and are designed to ensure that OCC uses an appropriate approach to managing model risk. OCC notes that the MRM Policy is part of a broader framework regarding model risk management that is designed to further the appropriate design,

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validation and operation of OCC's Risk Models.⁵

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To guide activities in this part of OCC's model risk framework, OCC shall primarily

⁵ For example, OCC's Margin Policy is also part of OCC's framework regarding model risk management in that it is designed to be consistent with the requirement in Rule 17Ad-22(e)(6)(vii) that OCC's policies and procedures provide for a risk-based margin system that requires a margin model validation not less than annually. <u>See</u> 17 CFR 240.17Ad-22(e)(6)(vii). OCC recently filed a proposed rule change with the Commission concerning the formalizing and updating of its Margin Policy, which is currently pending Commission review. <u>See</u> Securities Exchange Act Release No. 82355 (December 19, 2017), 82 FR 61060 (December 26, 2017) (SR-OCC-2017-007).

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follow the *Supervisory Guidance on Model Risk Management* issued by the Board of Governors of the Federal Reserve System and the Office of the Comptroller of the Currency (April 4, 2011), as well as any applicable regulatory requirements.⁷

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Under the proposed MRM Policy, QRM would review, evaluate, and propose model changes (to include Model Defects,⁸ enhancements, and/or Decommissioning⁹ of a Risk Model) in accordance with the Model Implementation Procedure and OCC's Legal Services Policy (and related procedures). New products that are non-standard equity options/futures shall be reviewed

⁸ Under the proposed Policy, "Risk Model Defect" would be defined as an error, flaw, failure, or fault in a computer program or system that causes a Risk Model to produce an incorrect or unexpected result, or to behave in unintended ways.

⁹ Under the proposed Policy, a "Decommissioned Model" would be defined as a Risk Model that has been approved by the Risk Committee to no longer be used to estimate margin or Clearing Fund exposures.

by QRM according to the Model Implementation Procedure for determination as to whether or not a new Risk Model is required or if the use of an existing Risk Model is fit for purpose. QRM shall recommend approval to OCC's Model Risk Working Group ("MRWG")¹⁰ in accordance with the Model Risk Working Group Procedure subsequent to effective challenge and approval by MVG.

Under the Policy, QRM shall seek Legal department ("Legal") review to determine if a new Risk Model or change to an existing Risk Model requires regulatory filing prior to implementation and use in accordance with OCC's Legal Services Policy and related procedures. OCC shall not implement or use such Risk Model until Legal provides a written notice to QRM and MVG that the Risk Model does not require any additional regulatory action prior to implementation and use or, if a regulatory filing is required, that all requisite filing and approvals are complete.

Under the proposed Policy, QRM shall implement new Risk Models and changes to existing Risk Models in accordance with the Risk Model Development Procedure and the Model Implementation Procedure. QRM shall be responsible for overseeing the quality assurance and related testing procedures required for implementation and/or Decommissioning of a Risk Model. Reporting and escalation to the MRWG shall be performed in accordance with the Model Risk Working Group Procedure. The MRWG shall review and, if appropriate, approve

¹⁰ The MRWG is responsible for assisting OCC's Management Committee in overseeing and governing OCC's model-related risk issues and consists of representatives from Financial Risk Management, QRM, MVG and Enterprise Risk Management.

all new Risk Models, Material Changes¹¹ to Risk Models, and proposals for Decommissioning Risk Models prior to submitting to the Management Committee for approval.

Under the Policy, the Management Committee would be responsible for reviewing and approving each new Risk Model and each Material Change to a Risk Model prior to implementation and use. The Management Committee also would review and approve each proposal for Decommissioning a Risk Model. Each approval shall constitute a recommendation and be reported to the Risk Committee for further review and approval. The Risk Committee shall review and, if appropriate, approve each new Risk Model and each Material Change prior to implementation and use, except that Material Changes to OCC's margin and Clearing Fund methodologies shall be referred to the Board for review and, if appropriate, final approval, upon a recommendation from the Risk Committee. The Risk Committee also shall review and, if appropriate, approve the Decommissioning of a Risk Model prior to removing it from the Model Inventory.¹²

Risk Model Monitoring

Pursuant to the proposed Policy, QRM shall monitor the use and performance of Risk Models according to the Model Backtesting Procedure, the Business Backtesting Procedure, and the Margin Model Parameter Review and Sensitivity Analysis Procedure. Monitoring shall be

¹¹ Under the proposed Policy, "Material Change" would be defined as a change to a Risk Model that, as deemed by the MRWG, requires Risk Committee approval due to its anticipated effect on margin or Clearing Fund requirements, impact to Clearing Members, volume or open interest, backtesting performance, etc. Material Changes may be quantitative or qualitative in nature and take into account the likelihood, impact, and context of the change relative to Risk Model.

¹² Under the proposed Policy, "Model Inventory" would be defined as OCC's database of in-use Risk Models and Methodologies.

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reasonably designed to determine if the Risk Model is accurate, reliable and robust, and to identify limitations. The results of monitoring also shall be used to evaluate the behavior of a Risk Model over a range of input values. Risk tolerance and associated key risk indicators would be maintained by QRM to measure and monitor model risk. These risk measures, in addition to monthly Risk Model parameter reviews shall be reported to the MRWG and escalated to the Management Committee and/or Risk Committee as necessary in accordance with the Model Risk Working Group Procedure.

Model Validation Group

Under the proposed Policy, the First Vice President of MVG shall have qualified staff with the requisite knowledge, skills, and expertise to perform validations in accordance with the Model Validation Procedure. MVG personnel responsible for validation shall be independent from, shall not report to, and shall otherwise be free from influence from OCC business areas involved in the development, implementation and operation of such Risk Models.

Annual Model Validation Plan

The First Vice President of MVG shall develop and maintain an Annual Model Validation Plan ("Annual Plan"). The Annual Plan, as defined in the Annual Model Validation Plan Procedure, is a schedule of Risk Model validations performed for all Risk Models on the Model Inventory. MVG's Annual Plan shall require all Risk Models on the Model Inventory to be validated no less than annually (where annually is defined as 12 months, or 365 days).

Pursuant to the proposed Policy, the Risk Committee shall review and approve the Annual Model Validation Plan and any removals or deferrals from the previously approved Annual Model Validation Plan based on recommendations from the Chief Risk Officer ("CRO"). In addition, the CRO shall provide a quarterly report to the Risk Committee that provides information on progress against the Annual Model Validation Plan.

Model Inventory

Pursuant to the proposed Policy, MVG shall maintain a complete and accurate inventory of Risk Models according to the Model Inventory Procedure. To ensure the Model Inventory is complete and accurate, MVG shall perform a firm-wide assessment on an annual basis in accordance with the Model Identification Procedure.

Independent Model Validation

Under the proposed Policy, MVG would be responsible for evaluating the performance of each Risk Model by performing Independent Model Validations¹³ in accordance with the Model Validation Procedure. Validations shall be performed according to the Model Validation Procedure, and shall include a review of Risk Model performance, parameters, and assumptions. Conclusions shall be formulated in the form of a "Model Assessment Report" and shall be reviewed by QRM upon conclusion of the report. MVG shall perform performance monitoring of Risk Models according to the Model Performance Monitoring Procedure. Findings from validations and performance monitoring shall be identified, monitored, remediated, and reported according to the Model Findings Management Procedure and presented to the Management Committee and Risk Committee in the form of a Model Risk Management Findings Dashboard.

¹³ Under the proposed Policy, "Independent Model Validation" would be defined as the evaluation of the performance of a Risk Model performed by a qualified person who is free from influence from the persons responsible for the development or operation of the models being validated.

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Pursuant to the proposed Policy, MVG shall validate all Risks Models prior to implementation and use in accordance with the Model Validation Procedure. Additionally, MVG shall review Material Changes to Risk Models prior to implementation of the Material Change and in accordance with the Model Implementation Procedure. MVG shall assign a model rating and model risk level to each Risk Model on the Model Inventory. The effectiveness of each Risk Model shall be reported by the CRO to the Risk Committee on a quarterly basis.

In the event a third-party validator is used to validate a Risk Model or in the event that OCC uses a third-party to develop a Risk Model, MVG shall oversee/perform the validation in accordance with the Model Validation Procedure. The CRO shall report results of third party validations of OCC's Risk Models and results of validations of third-party Risk Models to the Management Committee and Risk Committee along with any recommended actions and remediation plans associated with such validations.

Model Risk Working Group

Under the proposed Policy, the MRWG would be responsible for assisting OCC's Management Committee in overseeing and governing OCC's model-related risk issues. The MRWG consists of representatives from Financial Risk Management, QRM, MVG and Enterprise Risk Management as well as representatives from Legal to provide adequate support and Legal expertise as it relates to Model Risk. The MRWG shall serve as a resource by overseeing model risk, which includes, without limitation, ongoing model risk monitoring activities, approving, or recommending approval of new Risk Models and Material Changes to Risk Models, and tracking Model Defects and remediation activities as stipulated in the Model Risk Working Group Procedure.

Policy Updates Exceptions and Violations

Finally, pursuant to the proposed Policy, OCC's Management Committee shall review and approve the Policy on an annual basis and recommend approval of the Policy to the Risk Committee. The Management Committee also shall review and approve any material changes to the Policy and recommend further approval to the Risk Committee.

The MRM Policy also would contain OCC's standard policy language concerning the policy exception and violation processes. Specifically, any request for an exception to the Policy must be made in writing to a member of the Office of the Executive Chairman,¹⁴ who is then responsible for reviewing the exception request and providing a decision in writing to the person requesting the exception. OCC's CRO, Chief Compliance Officer, or Chief Audit Executive may also request an exception to the Policy directly to the Board. All requests for exceptions and their dispositions would be reported to the Board or Risk Committee as appropriate no later than its next regularly scheduled meeting, in a format approved by the Chair of the Board or Risk Committee. In addition, Policy violations shall be reported to OCC's Chief Compliance Officer, or, if the violation involves the Compliance Department, to the head of Internal Audit or a member of the Office of the Executive Chairman.

¹⁴ OCC's Office of the Executive Chairman currently consists of the Executive Chairman and Chief Executive Officer, President and Chief Operating Officer, and Chief Administrative Officer.

B. <u>Statutory Basis</u>

Section 17A(b)(3)(F) of the Act¹⁵ requires, among other things, that the rules of a clearing agency be designed to assure the safeguarding of securities and funds in the custody or control of the clearing agency or for which it is responsible, and, in general, to protect investors and the public interest. As described in more detail above, OCC believes that formalizing the MRM Policy would help to ensure that OCC maintains policies and procedures that are reasonably designed to provide for a robust model risk management framework, which includes controls pertaining to the governance, development, implementation, use, monitoring, and Independent Model Validation of OCC's Risk Models. In this way, the Policy is intended to further the appropriate design, validation and operation of Risk Models within OCC's performance of clearance and settlement services. The MRM Policy thereby promotes, for example, the development, use and monitoring of appropriately conservative margin and Clearing Fund requirements. As a result, OCC believes the proposed rule change is designed to assure the safeguarding of securities and funds at OCC and, in general, protect investors and the public interest consistent with Section 17A(b)(3)(F) of the Act.¹⁶

Rule $17Ad-22(e)(2)^{17}$ requires a covered clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to provide for governance arrangements that, among other things: (i) are clear and transparent; (ii) clearly

¹⁵ 15 U.S.C. 78q-1(b)(3)(F).

¹⁶ <u>Id.</u>

¹⁷ 17 CFR 240.17Ad-22(e)(2).

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prioritize safety and efficiency of the covered clearing agency; (iii) support the public interest requirements in Section 17A of the Act¹⁸ applicable to clearing agencies, and the objectives of owners and participants; and (iv) specify clear and direct lines of responsibility. The proposed Policy would describe, in detail, OCC's overall framework for Risk Model governance. This includes establishing clear, transparent, and direct responsibilities for OCC's Board, Risk Committee, management, and other OCC staff in connection with OCC's model risk management framework and how the relevant groups and individuals interact. In particular, the proposed Policy is designed to establish appropriate governance arrangements for the development, implementation, use, monitoring, and Independent Model Validation of OCC's Risk Models. OCC believes that these governance arrangements prioritize the safety and efficiency of OCC and support the public interest requirements of the Act by describing specifies roles, responsibilities and requirements for OCC's model testing, monitoring, validation, and review processes, thereby helping to ensure that OCC maintains a robust framework for managing its model risk.

Rule $17Ad-22(e)(3)(i)^{19}$ requires a covered clearing agency to establish, implement, maintain, and enforce written policies and procedures reasonably designed to, among other things, maintain a sound risk management framework for comprehensively managing its risks,

¹⁸ 15 U.S.C. 78q-1. The public interest requirements in Section 17A of the Act include that the "prompt and accurate clearance and settlement of securities transactions, including the transfer of record ownership and the safeguarding of securities and funds related thereto, are necessary for the protection of investors and persons facilitating and acting on behalf of investors." See 15 U.S.C. 78q-1(a)(1)(A).

¹⁹ 17 CFR 240.17Ad-22(e)(3)(i).

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which includes risk management policies, procedures, and systems designed to identify, measure, monitor, and manage such risks and that are subject to review on a specified periodic basis and approved by its Board annually. OCC believes the proposed Policy is consistent with Rule $17Ad-22(e)(3)(i)^{20}$ because it is an essential component of OCC's overall framework for comprehensively managing its risks, which includes model risk. Specifically, OCC believes the proposed Policy is reasonably designed to identify, measure, monitor, and manage model risks by providing a sound framework for defining, developing, maintaining, and validating OCC's Risk Models and for making any changes necessary to ensure those Risk Models continue to address relevant risks appropriately. As noted above, the proposed Policy provides that OCC's QRM staff, as part of model risk management and model development, are responsible for monitoring model performance on a continuous basis. Specifically, QRM staff would monitor OCC's Risk Models to determine whether such models perform as intended and are accurate, reliable and robust and to identify any Risk Model limitations. The results of monitoring also shall be used to evaluate the behavior of a Risk Model over a range of input values. Moreover, the proposed Policy describes MVG's obligations for the independent validation of new Risk Models, Material Changes to Risk Models, and the annual validation of Risk Models.

Rules 17Ad-22(e)(4)(vii), (e)(6)(vii) and (e)(7)(vii)²¹ require a covered clearing agency establish, implement, maintain and enforce written policies and procedures reasonably designed to perform independent model validations on its credit risk models, margin models, and liquidity

²⁰ <u>Id.</u>

²¹ 17 CFR 240.17Ad-22(e)(4)(vii), (e)(6)(vii) and (e)(7)(vii).

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risk models not less than annually or more frequently as may be contemplated by the clearing agency's risk management framework. OCC believes the proposed rule change is consistent with Rules 17Ad-22(e)(4)(vii), (e)(6)(vii) and (e)(7)(vii)²² because the Policy would require OCC to perform an Independent Model Validation of its Risk Models on at least an annual basis, or more frequently as needed, and prior to the implementation of new Risk Models or Material Changes to Risk Models. OCC also believes that the proposed rule change is consistent with the requirement in Rule 17Ad-22(b)(4)²³ that OCC's policies and procedures be reasonably designed to provide for an annual model validation of OCC's margin models, that evaluates their performance and the related parameters and assumptions, by a qualified person who is free from influence from the persons responsible for the development or operation of the models being validated. As noted above, the proposed Policy provides that OCC's model validation staff reviews each Risk Model in OCC's inventory, including margin models, at least annually and such staff is removed from the primary development path of a model to preserve its ability to provide an independent assessment.

Finally, Rule 17Ad-22(b)(2)²⁴ requires, in part, that a registered clearing agency establish, implement, maintain and enforce written policies and procedures reasonably designed to use risk-based models and parameters to set margin requirements. OCC believes that the proposed Policy would provide for clear identification of its risk-based models and thereby

Id.

²²

²³ 17 CFR 240.17Ad-22(b)(4).

²⁴ 17 CFR 240.17Ad-22(b)(2).

promote compliance with the requirement in Rule $17Ad-22(b)(2)^{25}$ that OCC's policies and procedures be reasonably designed to use risk-based models and parameters to set margin requirements.

The proposed rule change is not inconsistent with the existing rules of OCC, including any other rules proposed to be amended.

Item 4. <u>Self-Regulatory Organization's Statement on Burden on Competition</u>

Section 17A(b)(3)(I) of the Act²⁶ 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. OCC does not believe that the proposed rule change would impact or impose any burden on competition. The proposed rule change addresses OCC's internal framework surrounding the governance, development, implementation, use, monitoring, and validation of Risk Models. Under this framework, OCC's controls regarding the design, use, implementation and validation of models, as set forth in the proposed Policy, insofar as they affect margin or Clearing Fund requirements, would have an equal impact on all Clearing Members. Consequently, the proposed Policy does not provide any Clearing Member with a competitive advantage over any other Clearing Member. Further, the proposed rule change would not affect any Clearing Member's access to OCC's services or impose any direct burdens on Clearing Members. Accordingly, the proposed rule change would not unfairly inhibit access to OCC's services or disadvantage or favor any particular user in relationship to another user.

²⁵ Id.

²⁶ 15 U.S.C. 78q-1(b)(3)(I).

For the foregoing reasons, OCC believes that the proposed rule change is in the public

interest, would be consistent with the requirements of the Act applicable to clearing agencies,

and would not impact or impose a burden on competition.

Item 5.Self-Regulatory Organization'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 rule change and none have been received.

Item 6. <u>Extension of Time Period for Commission Action</u>

Not applicable.

Item 7.Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for
Accelerated Effectiveness Pursuant to Section 19(b)(2) or Section 19(b)(7)(D)

Not applicable.

Item 8.Proposed Rule Change Based on Rule of Another Self-Regulatory
Organization or of the Commission

Not applicable.

Item 9. <u>Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act</u>

Not applicable.

Item 10.Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing
and Settlement Supervision Act

Not applicable.

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Item 11. <u>Exhibits</u>

 Exhibit 1A.
 Completed Notice of Proposed Rule Change for publication in the Federal

 Register.

Exhibit 5. Model Risk Management Policy.

CONFIDENTIAL TREATMENT IS REQUESTED FOR EXHIBIT 5

PURSUANT TO SEC RULE 24b-2

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, The Options Clearing Corporation has caused this filing to be signed on its behalf by the undersigned

hereunto duly authorized.

THE OPTIONS CLEARING CORPORATION

By:_____

Justin W. Byrne Vice President, Regulatory Filings

EXHIBIT 1A

SECURITIES AND EXCHANGE COMMISSION (Release No. 34-[_____]; File No. SR-OCC-2017-011)

January ___, 2018

Self-Regulatory Organizations; The Options Clearing Corporation; Notice of Filing of Proposed Rule Change Related to The Options Clearing Corporation's Model Risk Management Policy

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"),¹ and Rule 19b-4 thereunder,² notice is hereby given that on December 28, 2017, The Options Clearing Corporation ("OCC") filed with the Securities and Exchange Commission ("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. <u>Clearing Agency's Statement of the Terms of Substance of the Proposed</u> <u>Rule Change</u>

The proposed rule change by OCC would formalize and update OCC's Model Risk Management Policy ("MRM Policy" or "Policy") in connection with multiple requirements applicable to OCC under Rule 17Ad-22, including Rules 17Ad-22(b)(2) concerning margin requirements and (b)(4) concerning model validation as well as Rules 17Ad-22(e)(2) concerning governance, (e)(3) concerning frameworks for the comprehensive management of risks, and (e)(4)(vii), (e)(6)(vii) and (e)(7)(vii) concerning

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

model validation.³ The MRM Policy is included as confidential Exhibit 5 of the filing. The Policy is being is submitted without marking to improve readability as it is being submitted in its entirety as new rule text.

The proposed rule change does not require any changes to the text of OCC's By-Laws or Rules. 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.⁴

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

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) <u>Clearing Agency's Statement of the Purpose of, and Statutory Basis for,</u> <u>the Proposed Rule Change</u>
 - (1) <u>Purpose</u>

Background

OCC's use of models inherently exposes OCC to model risk.⁵ To help manage this risk, OCC is proposing to formalize and update its MRM Policy, which sets forth the general framework for OCC's model risk management practices. The MRM Policy

³ 17 CFR 240.17Ad-22(b)(2), (b)(4), (e)(2) - (4), and (e)(6) - (7).

⁴ OCC's By-Laws and Rules can be found on OCC's public website: <u>http://optionsclearing.com/about/publications/bylaws.jsp</u>.

⁵ Under the proposed Policy, "Model Risk" would be defined as the potential for adverse consequences from decisions based on incorrect or misused model outputs.

would apply to all Risk Models⁶ used by OCC to determine, quantify or measure actual or potential risk exposures or risk mitigating actions. The purpose of the MRM Policy is to ensure that OCC appropriately manages its model risks by clearly outlining the roles and responsibilities of OCC's (1) Quantitative Risk Management department ("QRM"), (2) Model Validation Group ("MVG"), and (3) Model Risk Working Group ("MRWG") in model development, implementation, use, monitoring, and validation. The provisions of the MRM Policy addressing these core elements are described in greater detail below and are designed to ensure that OCC uses an appropriate approach to managing model risk. OCC notes that the MRM Policy is part of a broader framework regarding model risk management that is designed to further the appropriate design, validation and operation of OCC's Risk Models.⁷

Model Risk Management Policy

Introduction

⁶ Under the proposed Policy, "Risk Models" would be defined as any quantitative method or approach that applies statistical, economic, financial, or mathematical theories, techniques, and/or assumptions to process inputs into quantitative estimates, forecasts, or projections. A Risk Model may also be a quantitative method with inputs that are qualitative or based on business judgment. Under the Policy, the term Risk Models would be used specifically in the context of credit risk models, margin system and related models, and liquidity risk models.

⁷ For example, OCC's Margin Policy is also part of OCC's framework regarding model risk management in that it is designed to be consistent with the requirement in Rule 17Ad-22(e)(6)(vii) that OCC's policies and procedures provide for a riskbased margin system that requires a margin model validation not less than annually. <u>See</u> 17 CFR 240.17Ad-22(e)(6)(vii). OCC recently filed a proposed rule change with the Commission concerning the formalizing and updating of its Margin Policy, which is currently pending Commission review. <u>See</u> Securities Exchange Act Release No. 82355 (December 19, 2017), 82 FR 61060 (December 26, 2017) (SR-OCC-2017-007).

The MRM Policy would apply to all Risk Models used by OCC to determine, quantify or measure actual or potential risk exposures or risk mitigating actions. As noted above, Risk Models are defined under the Policy to be credit risk models (e.g., models concerning OCC's Clearing Fund), margin system and related models (e.g., OCC's System for Theoretical Analysis and Numerical Simulations or "STANS"), and liquidity risk models.

The MRM Policy also would clarify that OCC considers a Risk Model to be any quantitative method or approach that applies statistical, economic, financial, or mathematical theories, techniques, and/or assumptions to process inputs into quantitative estimates, forecasts, or projections. A Risk Model can also be a quantitative method with inputs that are qualitative or based on business judgment.⁸ The MRM Policy also would define "Methodology" to mean a collection of Risk Models used to estimate financial risk exposures.

To guide activities in this part of OCC's model risk framework, OCC shall primarily follow the *Supervisory Guidance on Model Risk Management* issued by the Board of Governors of the Federal Reserve System and the Office of the Comptroller of the Currency (April 4, 2011), as well as any applicable regulatory requirements.⁹

The MRM Policy sets forth a governance structure for the allocation of roles and responsibilities for Risk Model development, implementation, use, monitoring, and validation among different groups and individuals, including OCC's Board, the Risk

⁸ See SR Letter 11-7, "Guidance on Model Risk Management," Board of Governors of the Federal Reserve System (April 4, 2011), and OCC Bulletin 2011-12, "Sound Practices for Model Risk Management," The Office of the Comptroller of the Currency (April 4, 2011).

^{9 &}lt;u>Id.</u>

Committee of the Board ("Risk Committee"), management, and other OCC staff. These roles and responsibilities are described in further detail below.

Quantitative Risk Management

Under the proposed Policy, the Executive Vice President of OCC's Financial Risk Management department ("EVP-FRM") would be responsible for (i) having staff with the requisite knowledge, skills, and expertise to perform model risk management activities necessary to the staffs' responsibilities and (ii) overseeing Risk Model development, implementation, monitoring, and use.

Risk Model Development

Under the proposed Policy, Risk Model development and implementation shall be conducted by QRM unless a third-party is otherwise engaged by QRM to develop a Risk Model. Where QRM does not develop a Risk Model, it shall oversee the development, implementation, and monitoring in accordance with the Risk Model Development Procedure.

The design, theory, and logic of each Risk Model used by OCC shall be described in a document maintained by QRM and shall take into consideration published literature and industry best practice, where it is available. The document shall include a description of the Risk Model, the intended purpose of the Risk Model, the motivation of the Risk Model assumptions, the test data supporting the Risk Model, the Risk Model limitations, and other details as outlined in OCC's Maintenance and Periodic Review of Methodology Procedure. QRM also would be responsible for describing each Risk Model Methodology in a Methodology document. Requirements for Methodology documentation shall be contained in the Maintenance and Periodic Review of Methodology Procedure. The EVP-FRM also shall review and, if appropriate, approve the Risk Model documentation. The EVP-FRM may delegate the responsibility for reviewing and approving such Risk Model documentation to the First Vice President, Quantitative Risk Management, who shall provide notice of any approval to the EVP-FRM.

Risk Model Implementation

Under the proposed MRM Policy, QRM would review, evaluate, and propose model changes (to include Model Defects,¹⁰ enhancements, and/or Decommissioning¹¹ of a Risk Model) in accordance with the Model Implementation Procedure and OCC's Legal Services Policy (and related procedures). New products that are non-standard equity options/futures shall be reviewed by QRM according to the Model Implementation Procedure for determination as to whether or not a new Risk Model is required or if the use of an existing Risk Model is fit for purpose. QRM shall recommend approval to OCC's Model Risk Working Group ("MRWG")¹² in accordance with the Model Risk Working Group Procedure subsequent to effective challenge and approval by MVG.

Under the Policy, QRM shall seek Legal department ("Legal") review to determine if a new Risk Model or change to an existing Risk Model requires regulatory

¹⁰ Under the proposed Policy, "Risk Model Defect" would be defined as an error, flaw, failure, or fault in a computer program or system that causes a Risk Model to produce an incorrect or unexpected result, or to behave in unintended ways.

¹¹ Under the proposed Policy, "Decommissioned Model" would be defined as a Risk Model that has been approved by the Risk Committee to no longer be used to estimate margin or Clearing Fund exposures.

¹² The MRWG is responsible for assisting OCC's Management Committee in overseeing and governing OCC's model-related risk issues and consists of representatives from Financial Risk Management, QRM, MVG and Enterprise Risk Management.

filing prior to implementation and use in accordance with OCC's Legal Services Policy and related procedures. OCC shall not implement or use such Risk Model until Legal provides a written notice to QRM and MVG that the Risk Model does not require any additional regulatory action prior to implementation and use or, if a regulatory filing is required, that all requisite filing and approvals are complete.

Under the proposed Policy, QRM shall implement new Risk Models and changes to existing Risk Models in accordance with the Risk Model Development Procedure and the Model Implementation Procedure. QRM shall be responsible for overseeing the quality assurance and related testing procedures required for implementation and/or Decommissioning of a Risk Model. Reporting and escalation to the MRWG shall be performed in accordance with the Model Risk Working Group Procedure. The MRWG shall review and, if appropriate, approve all new Risk Models, Material Changes¹³ to Risk Models, and proposals for Decommissioning Risk Models prior to submitting to the Management Committee for approval.

Under the Policy, the Management Committee would be responsible for reviewing and approving each new Risk Model and each Material Change to a Risk Model prior to implementation and use. The Management Committee also would review and approve each proposal for Decommissioning a Risk Model. Each approval shall constitute a recommendation and be reported to the Risk Committee for further review and approval. The Risk Committee shall review and, if appropriate, approve each new

¹³ Under the proposed Policy, "Material Change" would be defined as a change to a Risk Model that, as deemed by the MRWG, requires Risk Committee approval due to its anticipated effect on margin or Clearing Fund requirements, impact to Clearing Members, volume or open interest, backtesting performance, etc. Material Changes may be quantitative or qualitative in nature and take into account the likelihood, impact, and context of the change relative to Risk Model.

Risk Model and each Material Change prior to implementation and use, except that Material Changes to OCC's margin and Clearing Fund methodologies shall be referred to the Board for review and, if appropriate, final approval, upon a recommendation from the Risk Committee. The Risk Committee also shall review and, if appropriate, approve the Decommissioning of a Risk Model prior to removing it from the Model Inventory.¹⁴

Risk Model Monitoring

Pursuant to the proposed Policy, QRM shall monitor the use and performance of Risk Models according to the Model Backtesting Procedure, the Business Backtesting Procedure, and the Margin Model Parameter Review and Sensitivity Analysis Procedure. Monitoring shall be reasonably designed to determine if the Risk Model is accurate, reliable and robust, and to identify limitations. The results of monitoring also shall be used to evaluate the behavior of a Risk Model over a range of input values. Risk tolerance and associated key risk indicators would be maintained by QRM to measure and monitor model risk. These risk measures, in addition to monthly Risk Model parameter reviews shall be reported to the MRWG and escalated to the Management Committee and/or Risk Committee as necessary in accordance with the Model Risk Working Group Procedure.

Model Validation Group

Under the proposed Policy, the First Vice President of MVG shall have qualified staff with the requisite knowledge, skills, and expertise to perform validations in accordance with the Model Validation Procedure. MVG personnel responsible for validation shall be independent from, shall not report to, and shall otherwise be free from

¹⁴ Under the proposed Policy, "Model Inventory" would be defined as OCC's database of in-use Risk Models and Methodologies.

influence from OCC business areas involved in the development, implementation and operation of such Risk Models.

Annual Model Validation Plan

The First Vice President of MVG shall develop and maintain an Annual Model Validation Plan ("Annual Plan"). The Annual Plan, as defined in the Annual Model Validation Plan Procedure, is a schedule of Risk Model validations performed for all Risk Models on the Model Inventory. MVG's Annual Plan shall require all Risk Models on the Model Inventory to be validated no less than annually (where annually is defined as 12 months, or 365 days).

Pursuant to the proposed Policy, the Risk Committee shall review and approve the Annual Model Validation Plan and any removals or deferrals from the previously approved Annual Model Validation Plan based on recommendations from the Chief Risk Officer ("CRO"). In addition, the CRO shall provide a quarterly report to the Risk Committee that provides information on progress against the Annual Model Validation Plan.

Model Inventory

Pursuant to the proposed Policy, MVG shall maintain a complete and accurate inventory of Risk Models according to the Model Inventory Procedure. To ensure the Model Inventory is complete and accurate, MVG shall perform a firm-wide assessment on an annual basis in accordance with the Model Identification Procedure.

Independent Model Validation

Under the proposed Policy, MVG would be responsible for evaluating the performance of each Risk Model by performing Independent Model Validations¹⁵ in accordance with the Model Validation Procedure. Validations shall be performed according to the Model Validation Procedure, and shall include a review of Risk Model performance, parameters, and assumptions. Conclusions shall be formulated in the form of a "Model Assessment Report" and shall be reviewed by QRM upon conclusion of the report. MVG shall perform performance monitoring of Risk Models according to the Model Performance Monitoring Procedure. Findings from validations and performance monitoring shall be identified, monitored, remediated, and reported according to the Model Findings Management Procedure and presented to the Management Committee and Risk Committee in the form of a Model Risk Management Findings Dashboard.

Pursuant to the proposed Policy, MVG shall validate all Risks Models prior to implementation and use in accordance with the Model Validation Procedure. Additionally, MVG shall review Material Changes to Risk Models prior to implementation of the Material Change and in accordance with the Model Implementation Procedure. MVG shall assign a model rating and model risk level to each Risk Model on the Model Inventory. The effectiveness of each Risk Model shall be reported by the CRO to the Risk Committee on a quarterly basis.

In the event a third-party validator is used to validate a Risk Model or in the event that OCC uses a third-party to develop a Risk Model, MVG shall oversee/perform the validation in accordance with the Model Validation Procedure. The CRO shall report

¹⁵ Under the proposed Policy, "Independent Model Validation" would be defined as the evaluation of the performance of a Risk Model performed by a qualified person who is free from influence from the persons responsible for the development or operation of the models being validated.

results of third party validations of OCC's Risk Models and results of validations of third-party Risk Models to the Management Committee and Risk Committee along with any recommended actions and remediation plans associated with such validations.

Model Risk Working Group

Under the proposed Policy, the MRWG would be responsible for assisting OCC's Management Committee in overseeing and governing OCC's model-related risk issues. The MRWG consists of representatives from Financial Risk Management, QRM, MVG and Enterprise Risk Management as well as representatives from Legal to provide adequate support and Legal expertise as it relates to Model Risk. The MRWG shall serve as a resource by overseeing model risk, which includes, without limitation, ongoing model risk monitoring activities, approving, or recommending approval of new Risk Models and Material Changes to Risk Models, and tracking Model Defects and remediation activities as stipulated in the Model Risk Working Group Procedure.

Policy Updates Exceptions and Violations

Finally, pursuant to the proposed Policy, OCC's Management Committee shall review and approve the Policy on an annual basis and recommend approval of the Policy to the Risk Committee. The Management Committee also shall review and approve any material changes to the Policy and recommend further approval to the Risk Committee.

The MRM Policy also would contain OCC's standard policy language concerning the policy exception and violation processes. Specifically, any request for an exception to the Policy must be made in writing to a member of the Office of the Executive Chairman,¹⁶ who is then responsible for reviewing the exception request and providing a decision in writing to the person requesting the exception. OCC's CRO, Chief Compliance Officer, or Chief Audit Executive may also request an exception to the Policy directly to the Board. All requests for exceptions and their dispositions would be reported to the Board or Risk Committee as appropriate no later than its next regularly scheduled meeting, in a format approved by the Chair of the Board or Risk Committee. In addition, Policy violations shall be reported to OCC's Chief Compliance Officer, or, if the violation involves the Compliance Department, to the head of Internal Audit or a member of the Office of the Executive Chairman.

(2) <u>Statutory Basis</u>

Section 17A(b)(3)(F) of the Act¹⁷ requires, among other things, that the rules of a clearing agency be designed to assure the safeguarding of securities and funds in the custody or control of the clearing agency or for which it is responsible, and, in general, to protect investors and the public interest. As described in more detail above, OCC believes that formalizing the MRM Policy would help to ensure that OCC maintains policies and procedures that are reasonably designed to provide for a robust model risk management framework, which includes controls pertaining to the governance, development, implementation, use, monitoring, and Independent Model Validation of OCC's Risk Models. In this way, the Policy is intended to further the appropriate design, validation and operation of Risk Models within OCC's performance of clearance and

¹⁶ OCC's Office of the Executive Chairman currently consists of the Executive Chairman and Chief Executive Officer, President and Chief Operating Officer, and Chief Administrative Officer.

¹⁷ 15 U.S.C. 78q-1(b)(3)(F).

settlement services. The MRM Policy thereby promotes, for example, the development, use and monitoring of appropriately conservative margin and Clearing Fund requirements. As a result, OCC believes the proposed rule change is designed to assure the safeguarding of securities and funds at OCC and, in general, protect investors and the public interest consistent with Section 17A(b)(3)(F) of the Act.¹⁸

Rule 17Ad-22(e)(2)¹⁹ requires a covered clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to provide for governance arrangements that, among other things: (i) are clear and transparent; (ii) clearly prioritize safety and efficiency of the covered clearing agency; (iii) support the public interest requirements in Section 17A of the Act²⁰ applicable to clearing agencies, and the objectives of owners and participants; and (iv) specify clear and direct lines of responsibility. The proposed Policy would describe, in detail, OCC's overall framework for Risk Model governance. This includes establishing clear, transparent, and direct responsibilities for OCC's Board, Risk Committee, management, and other OCC staff in connection with OCC's model risk management framework and how the relevant groups and individuals interact. In particular, the proposed Policy is designed to establish appropriate governance arrangements for the development, implementation, use, monitoring, and Independent Model Validation of OCC's Risk Models. OCC believes

¹⁸ <u>Id.</u>

¹⁹ 17 CFR 240.17Ad-22(e)(2).

²⁰ 15 U.S.C. 78q-1. The public interest requirements in Section 17A of the Act include that the "prompt and accurate clearance and settlement of securities transactions, including the transfer of record ownership and the safeguarding of securities and funds related thereto, are necessary for the protection of investors and persons facilitating and acting on behalf of investors." See 15 U.S.C. 78q-1(a)(1)(A).

that these governance arrangements prioritize the safety and efficiency of OCC and support the public interest requirements of the Act by describing specifies roles, responsibilities and requirements for OCC's model testing, monitoring, validation, and review processes, thereby helping to ensure that OCC maintains a robust framework for managing its model risk.

Rule $17Ad-22(e)(3)(i)^{21}$ requires a covered clearing agency to establish, implement, maintain, and enforce written policies and procedures reasonably designed to, among other things, maintain a sound risk management framework for comprehensively managing its risks, which includes risk management policies, procedures, and systems designed to identify, measure, monitor, and manage such risks and that are subject to review on a specified periodic basis and approved by its Board annually. OCC believes the proposed Policy is consistent with Rule $17Ad-22(e)(3)(i)^{22}$ because it is an essential component of OCC's overall framework for comprehensively managing its risks, which includes model risk. Specifically, OCC believes the proposed Policy is reasonably designed to identify, measure, monitor, and manage model risks by providing a sound framework for defining, developing, maintaining, and validating OCC's Risk Models and for making any changes necessary to ensure those Risk Models continue to address relevant risks appropriately. As noted above, the proposed Policy provides that OCC's QRM staff, as part of model risk management and model development, are responsible for monitoring model performance on a continuous basis. Specifically, QRM staff would monitor OCC's Risk Models to determine whether such models perform as intended and

²¹ 17 CFR 240.17Ad-22(e)(3)(i).

²² <u>Id.</u>

are accurate, reliable and robust and to identify any Risk Model limitations. The results of monitoring also shall be used to evaluate the behavior of a Risk Model over a range of input values. Moreover, the proposed Policy describes MVG's obligations for the independent validation of new Risk Models, Material Changes to Risk Models, and the annual validation of Risk Models.

Rules 17Ad-22(e)(4)(vii), (e)(6)(vii) and (e)(7)(vii)²³ require a covered clearing agency establish, implement, maintain and enforce written policies and procedures reasonably designed to perform independent model validations on its credit risk models, margin models, and liquidity risk models not less than annually or more frequently as may be contemplated by the clearing agency's risk management framework. OCC believes the proposed rule change is consistent with Rules 17Ad-22(e)(4)(vii), (e)(6)(vii) and $(e)(7)(vii)^{24}$ because the Policy would require OCC to perform an Independent Model Validation of its Risk Models on at least an annual basis, or more frequently as needed, and prior to the implementation of new Risk Models or Material Changes to Risk Models. OCC also believes that the proposed rule change is consistent with the requirement in Rule 17Ad-22(b)(4)²⁵ that OCC's policies and procedures be reasonably designed to provide for an annual model validation of OCC's margin models, that evaluates their performance and the related parameters and assumptions, by a qualified person who is free from influence from the persons responsible for the development or operation of the models being validated. As noted above, the proposed Policy provides that OCC's model validation staff reviews each Risk Model in OCC's inventory,

²³ 17 CFR 240.17Ad-22(e)(4)(vii), (e)(6)(vii) and (e)(7)(vii).

²⁴ <u>Id.</u>

²⁵ 17 CFR 240.17Ad-22(b)(4).

including margin models, at least annually and such staff is removed from the primary development path of a model to preserve its ability to provide an independent assessment.

Finally, Rule 17Ad-22(b)(2)²⁶ requires, in part, that a registered clearing agency establish, implement, maintain and enforce written policies and procedures reasonably designed to use risk-based models and parameters to set margin requirements. OCC believes that the proposed Policy would provide for clear identification of its risk-based models and thereby promote compliance with the requirement in Rule 17Ad-22(b)(2)²⁷ that OCC's policies and procedures be reasonably designed to use risk-based models and parameters to set margin requirements.

The proposed rule change is not inconsistent with the existing rules of OCC, including any other rules proposed to be amended.

(B) <u>Clearing Agency's Statement on Burden on Competition</u>

Section 17A(b)(3)(I) of the Act²⁸ 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. OCC does not believe that the proposed rule change would impact or impose any burden on competition. The proposed rule change addresses OCC's internal framework surrounding the governance, development, implementation, use, monitoring, and validation of Risk Models. Under this framework, OCC's controls regarding the design, use, implementation and validation of models, as set forth in the proposed Policy, insofar as they affect margin or Clearing Fund requirements, would have an equal impact on all Clearing Members. Consequently, the proposed Policy does

²⁶ 17 CFR 240.17Ad-22(b)(2).

²⁷ <u>Id.</u>

²⁸ 15 U.S.C. 78q-1(b)(3)(I).

not provide any Clearing Member with a competitive advantage over any other Clearing Member. Further, the proposed rule change would not affect any Clearing Member's access to OCC's services or impose any direct burdens on Clearing Members. Accordingly, the proposed rule change would not unfairly inhibit access to OCC's services or disadvantage or favor any particular user in relationship to another user.

For the foregoing reasons, OCC believes that the proposed rule change is in the public interest, would be consistent with the requirements of the Act applicable to clearing agencies, and would not impact or impose a burden on competition.

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

Written comments on the proposed rule change were not and are not intended to be solicited with respect to the proposed rule 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 the proposed rule change, or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

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 (<u>http://www.sec.gov/rules/sro.shtml</u>); or
- Send an e-mail to <u>rule-comments@sec.gov</u>. Please include File Number SR-OCC-2017-011 on the subject line.

Paper Comments:

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

All submissions should refer to File Number SR-OCC-2017-011. This file number should be included on the subject line if e-mail 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 (http://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 10:00 a.m. and 3:00 p.m. Copies of such 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/about/publications/bylaws.jsp.

All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly.

All submissions should refer to File Number SR-OCC-2017-011 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.²⁹

Robert W. Errett Deputy Secretary

Action as set forth recommended herein APPROVED pursuant to authority delegated by the Commission under Public Law 87-592.

For: Division of Trading and Markets

By:_____

Print Name:_____

Date:_____

²⁹ 17 CFR 200.30-3(a)(12).