

Required fields are shown with yellow backgrounds and asterisks.

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| Page 1 of * 128 | SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 Form 19b-4 | File No.* SR - 2020 - * 008 Amendment No. (req. for Amendments *) |
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Filing by National Securities Clearing Corporation
Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

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| Initial * <input checked="" type="checkbox"/> | Amendment * <input type="checkbox"/> | Withdrawal <input type="checkbox"/> | Section 19(b)(2) * <input checked="" type="checkbox"/> | Section 19(b)(3)(A) * <input type="checkbox"/> | Section 19(b)(3)(B) * <input type="checkbox"/> |
| Pilot <input type="checkbox"/> Extension of Time Period for Commission Action * <input type="checkbox"/> Date Expires * <input type="text"/> | | | Rule <input type="checkbox"/> 19b-4(f)(1) <input type="checkbox"/> 19b-4(f)(4) <input type="checkbox"/> 19b-4(f)(2) <input type="checkbox"/> 19b-4(f)(5) <input type="checkbox"/> 19b-4(f)(3) <input type="checkbox"/> 19b-4(f)(6) | | |

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| Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010 Section 806(e)(1) * <input type="checkbox"/> Section 806(e)(2) * <input type="checkbox"/> | Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934 Section 3C(b)(2) * <input type="checkbox"/> |
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| Exhibit 2 Sent As Paper Document <input type="checkbox"/> | Exhibit 3 Sent As Paper Document <input checked="" type="checkbox"/> |
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Description

Provide a brief description of the action (limit 250 characters, required when Initial is checked *).

Proposed amendment to Clearing Agency Model Risk Management Framework

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.

First Name * John Last Name * Petrofsky
 Title * Assistant General Counsel
 E-mail * jpetrofsky@dtcc.com
 Telephone * (813) 470-2115 Fax

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 04/10/2020
 By Brandon Becker
 Managing Director and Deputy General Counsel
 bbecker@dtcc.com

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 EFFF website.

Form 19b-4 Information *

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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.

Exhibit 1 - Notice of Proposed Rule Change *

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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 being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 1A- Notice of Proposed Rule Change, Security-Based Swap Submission, or Advance Notice by Clearing Agencies *

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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

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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

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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 Copies

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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.

Exhibit 5 - Proposed Rule Text

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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

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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.

1. Text of the Proposed Rule Change

(a) The proposed rule change of National Securities Clearing Corporation (“NSCC”) would amend the Clearing Agency Model Risk Management Framework (“Framework”) of NSCC and its affiliates The Depository Trust Company (“DTC”) and Fixed Income Clearing Corporation (“FICC,” and FICC together with NSCC, the “CCPs,” and the CCPs together with DTC, the “Clearing Agencies”).¹ Specifically, the proposed rule change would amend the Framework to (i) change the governance structure for approval of a model² validation (“Model Validation”), (ii) incorporate a model risk tolerance statement (“Model Risk Tolerance Statement”) and related provisions, (iii) clarify the definition of Model Owner (as defined below), (iv) reflect changes in the role of the Model Risk Governance Committee and a change of its name, (v) redefine the first and second line responsibilities and incentives relating to model performance monitoring and oversight and (vi) make other technical and clarifying changes to the text, as more fully described below.

Although the Clearing Agencies consider the Framework to be a rule, the proposed rule change does not require any changes to the Rules, By-Laws and Organization Certificate of DTC (“DTC Rules”), the Rulebook of the Government Securities Division (“GSD”) of Fixed Income Clearing Corporation (such Rulebook hereinafter referred to as “GSD Rules”), the Clearing

¹ The Framework sets forth the model risk management practices adopted by the Clearing Agencies, which have been designed to assist the Clearing Agencies in identifying, measuring, monitoring, and managing the risks associated with the design, development, implementation, use, and validation of quantitative models. See Securities Exchange Act Release No. 81485 (August 25, 2017), 82 FR 41433 (August 31, 2017) (File Nos. SR-DTC-2017-008; SR-FICC-2017-014; SR-NSCC-2017-008) (“2017 Notice”). The Framework is managed by the Clearing Agencies’ risk management areas generally responsible for model validation and control matters, DTCC Model Validation and Control (“MVC”), on behalf of each Clearing Agency, with review and oversight by senior management and the Risk Committee of the Board of Directors of each of DTC, FICC, and NSCC (collectively, “Boards”). See Id.

² The Clearing Agencies have adopted the following definition for the term “model”: “[M]odel” refers to a quantitative method, system, or approach that applies statistical, economic, financial, or mathematical theories, techniques, and assumptions to process input data into quantitative estimates. A “model” consists of three components: an information input component, which delivers assumptions and data to the model; a processing component, which transforms inputs into estimates; and a reporting component, which translates the estimates into useful business information. The definition of “model” also covers quantitative approaches whose inputs are partially or wholly qualitative or based on expert judgment, provided that the output is quantitative in nature. See Supervisory Guidance on Model Risk Management, SR Letter 11-7, dated April 4, 2011, issued by the Board of Governors of the Federal Reserve System and the Office of the Comptroller of the Currency, at 3.

Rules of the Mortgage-Backed Securities Division (“MBSD”) of Fixed Income Clearing Corporation (“such Clearing Rules hereinafter referred to as “MBSD Rules”), or the Rules & Procedures of NSCC (“NSCC Rules”), as the Framework would be a standalone document.³

(b) Not applicable.

(c) Not applicable.

2. Procedures of the Self-Regulatory Organization

(a) The proposed rule change was approved by the Risk Committee of the Boards, pursuant to delegated authority, at a meeting duly called and held on February 18, 2020.

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

(a) Purpose

The proposed rule change would amend the Framework to (i) change the governance structure for approval of a Model Validation, (ii) incorporate the Model Risk Tolerance Statement with respect to related forward-looking provisions associated with maintaining multiple model risk-related tolerance statements, (iii) clarify the definition of Model Owner, (iv) reflect changes in the role of the Model Risk Governance Committee and a change of its name, (v) redefine the first and second line responsibilities and incentives relating to model performance monitoring and oversight and (vi) make other technical and clarifying changes to the text, as more fully described below.

Although the Clearing Agencies consider the Framework to be a rule, the proposed rule change does not require any changes to the DTC Rules, GSD Rules, MBSD Rules, or NSCC Rules, as the Framework would be a standalone document.

Background

The Framework is maintained by the Clearing Agencies for compliance with Rule 17Ad-22(e)(4)(i), (e)(4)(vii), (e)(6)(iii), (e)(6)(vi), (e)(6)(vii), and (e)(7)(vii) under the Securities Exchange Act of 1934, as amended⁴ (“Act”), and sets forth the model risk management practices

³ Capitalized terms not defined herein are defined in the DTC Rules, NSCC Rules, GSD Rules or MBSD Rules, as applicable, available at <http://dtcc.com/legal/rules-and-procedures>.

⁴ 17 CFR 240.17Ad-22 (e)(4)(i), (e)(4)(vii), (e)(6)(iii), (e)(6)(vi), (e)(6)(vii), and (e)(7)(vii). Each of DTC, NSCC and FICC is a “covered clearing agency” as defined in Rule 17Ad-22(a)(5) and must comply with subsection (e) of Rule 17Ad-22. References to Rule

adopted by the Clearing Agencies, which have been designed to assist the Clearing Agencies in identifying, measuring, monitoring, and managing the risks associated with the design, development, implementation, use, and validation of quantitative models. The Framework is managed by MVC, on behalf of each Clearing Agency, with review and oversight by senior management of each Clearing Agency and the Boards.⁵

Pursuant to the Framework, a model developed for use by any of the Clearing Agencies and meeting the above definition for the term “model” is included and tracked within a model inventory (“Model Inventory”) maintained by MVC.⁶

As Model Validation and the process for approval of Model Validations is a key concept that flows through the Framework, NSCC is providing the following background regarding Model Validation to supplement the proposed rule changes discussed further below.

Model Validation

Pursuant to Section 3.3 (Full Model Validation) of the Framework, each new model undergoes a Model Validation (unless provisionally approved, as discussed below) pursuant to which MVC verifies that the model is performing as expected in accordance with its design objectives and business purpose. The Model Validation standards, referred to in the Framework as the full Model Validation standards for any new model include, but are not be limited to, the following core Model Validation activities, as listed in the Framework:

- evaluation of the model development documentation and testing;
- evaluation of model theory and assumptions, and identification of potential limitations;
- evaluation of data inputs and parameters;
- review of numerical implementation including replication for certain key model components, which would vary from model to model;

17Ad-22(e)(6) and its subparagraphs cited herein, and compliance therewith, apply to the CCPs only and do not apply to DTC.

⁵ The parent company of the Clearing Agencies is The Depository Trust & Clearing Corporation (“DTCC”). DTCC operates on a shared services model with respect to the Clearing Agencies. Most corporate functions are established and managed on an enterprise-wide basis pursuant to intercompany agreements under which it is generally DTCC that provides a relevant service to a Clearing Agency.

⁶ See 2017 Notice, supra note 1.

- independent testing: sensitivity analysis, stress testing, and benchmarking, as appropriate; and
- evaluation of model outputs, model performance, and back testing.

Pursuant to the Framework, Full Model Validation is applied under the following circumstances: (i) for all new models prior to their use in production; (ii) during periodic Model Validations (as described below); and (iii) when model changes are made that require independent Model Validation (as further described below).

Pursuant to Section 3.4 (Periodic Model Validation) of the Framework, models approved for use in production are subject to what is currently referred to in the Framework as periodic Model Validations for purposes of confirming that the models continue to operate as intended, identifying any deficiencies that would call into question the continuing validity of any such model's original approval and evaluating whether the model and its prior validation remain valid within the dynamics of current market conditions.

In this regard, the Framework describes that MVC performs a Model Validation for each model approved for use in production not less than annually (or more frequently as may be contemplated by such Clearing Agency's established risk management framework), including each credit risk model,⁷ liquidity risk model,⁸ and in the case of FICC and NSCC, as central counterparties, on their margin systems and related models.⁹

Periodic Model Validations and a full Model Validation follow identical standards. The Framework states that in certain cases, MVC may determine extra Model Validation activities are warranted based on previous Model Validation work and findings, changes in market conditions, or because performance monitoring of a model warrants extra validation.

Pursuant to the Framework all findings that result from a new Model Validation, a change Model Validation, a periodic Model Validation, or in connection with implementation of a new model or model change, are centrally tracked by MVC.

Proposed Rule Changes

Section 3.1 Model Inventory

Section 3.1 of the Framework currently explains how any model developed for use by any of the Clearing Agencies and meeting the above definition for the term "model" would be subject to tracking within the Model Inventory. MVC is charged with responsibility for adding models

⁷ See Rule 17Ad-22(e)(4)(vii). See supra note 4.

⁸ See Rule 17Ad-22(e)(7)(vii). See supra note 4.

⁹ See Rule 17Ad-22(e)(6)(vi) and (vii). See supra note 4.

to the Model Inventory and for tracking models listed in the Model Inventory. Section 3.1 also describes how a Model Inventory survey is conducted at least annually across the Clearing Agencies to confirm the Model Inventory is current. During the Annual Model Inventory Survey, any business area or support function intending to have a model developed for Clearing Agency use will submit materials relevant to such proposed model for MVC to review and assess whether such proposed model will be added to the Model Inventory.

Proposed Change to Enhance Flow and Readability of Text

Pursuant to the proposed rule change, NSCC would remove the use of the modifier “Clearing Agency” with respect to references to models in this section and throughout the Framework. The Framework relates solely to models of the Clearing Agencies and the use of this modifier is redundant. This change would enhance the flow and readability of the text by eliminating a redundancy.

Model Owner

Also, the proposed rule change would move the first reference to the defined term “Model Owner” from the last paragraph of the section to the second paragraph of the section and clarify the meaning of the term. This reference would appear in a new sentence that would describe that a Model Owner is the person designated by the applicable business area or support function to be responsible for a particular model, and that the Model Owner is recorded as the Model Owner for such model by MVC in the Model Inventory. The Framework currently describes the Model Owner as responsible for the development or operation of the model being validated by MVC, without noting that the Model Owner is an individual designated by the applicable business unit or support function. In this regard, the proposed change would provide clarification that an individual is designated as the Model Owner by the applicable business area or support function.

The proposed rule change would also change the Clearing Agency title of the individual that is the head of MVC that is referred to in a footnote in this section from being an Executive Director to Managing Director of each Clearing Agency to reflect that a more senior officer of the Clearing Agencies would be responsible for supervising the MVC.¹⁰ The footnote also states that the head of MVC reports to the Group Chief Risk Officer¹¹ rather than to any Model Owner.¹² This statement would be amended to clarify the independence of the MVC extends so that it is independent from anyone who develops and operates a model and not only a Model

¹⁰ A Managing Director is senior to an Executive Director.

¹¹ The Clearing Agencies’ Model Risk management standards and practices are subject to the oversight and direction of the Group Chief Risk Officer, who is the head of the Group Chief Risk Office.

¹² The purpose of the footnote is to make clear that MVC management has an independent reporting line to the Group Chief Risk Office, without potential conflict of reporting to any person that could be a Model Owner.

Owner. Also relating to the status of the head of MVC within the governance structure of the Clearing Agencies, this footnote would note that the head of MVC is a member of the Management Risk Committee (“MRC”).

Replacement of Term “Vendor” with “externally purchased”

Section 3.1 currently contains a paragraph which describes that all models, whether internally developed or purchased from a “vendor,” are subject to Model Validation. Pursuant to the proposed rule change, NSCC would revise the text of this paragraph to replace the term “vendor” with “externally purchased.” NSCC believes use of the term “externally purchased,” rather than vendor, would provide clarity with respect to sections of the Framework that apply to models developed internally versus externally.

Section 3.2 Model Materiality and Complexity

Section 3.2 of the Framework outlines that MVC assigns a materiality rating and a complexity rating to each model after it is added to the Model Inventory and describes that the applicable rating impacts the model’s validation in terms of prioritization and approval authority.

As more fully described below regarding Section 3.6 of the Framework, the proposed rule change would provide for the delegation of approval authority for all Model Validations from the Clearing Agencies’ management level committee responsible for model risk management matters to MVC, and the authority to approve model validations would vest solely in MVC.¹³

In this regard, a materiality rating and complexity rating would no longer be determinative of approval authority and the text that describes approval authority as impacted by materiality and complexity ratings would be deleted.

As a related change in the model governance structure, the forum currently referred to as the Model Risk Governance Committee would no longer maintain oversight authority in the model validation process and the text in this section would reflect that it is the forum for review of Model Risk matters rather than the formal forum for addressing Model Risk matters. The Model Risk Governance Committee’s name would be revised in this section and throughout to refer to it instead as the Model Risk Governance Council (“MRGC”) to reflect its proposed role as an advisory body rather than being part of the formal model governance process. In this regard, the text of Section 3.2 would be revised to reflect that the MRGC is a forum for review of, rather than addressing, Model Risk matters and a footnote would be added to state that MRGC is an advisory body that has no decision-making authority but would discuss and/or review certain model risk related matters which could result in advice and/or recommendation,

¹³ Currently, Model Validations that have a materiality rating of ‘Medium’ or ‘High,’ must be approved by the MRC, after the model has been reviewed and recommended to the MRC for approval by the MRGC. Additionally, all periodic Model Validations must currently be approved by the MRC to be deemed complete through review and recommendation by the MRGC.

which is generally directed to the interested party of a given model that brings the matter, as applicable.

The proposed change to shift responsibility for Model Risk matters, including approval of Model Validations, to MVC would ensure that MVC has sole responsibility for approving Model Validations, as MVC is best suited within the Clearing Agencies to manage the quantitative and technical expertise to carry out the related functions.

Section 3.5 - Model Change Management

Section 3.5 (Model Change Management) currently states that an active model may require changes in either structure or technique. Details for any model change request are provided to MVC for review and a determination of whether full Model Validation is required. This section also includes text that states to the extent that a vendor's version change may impact any existing model used in production, an impact study of the version change along with any other analysis/benchmarking shall be conducted as appropriate in MVC's reasonable business discretion.

The process described in this section will not be amended pursuant to the proposed rule change, however, to remain consistent with the use of terminology as described with respect to Section 3.1 above, references to "vendor" models in this section would be revised to reflect that models not developed by the Clearing Agencies would instead be referred to as externally purchased.

Section 3.6 - Model Approval and Control

Section 3.6 (Model Approval and Control) currently provides that all new models, and all material changes to existing models, undergo Model Validation by MVC and must be approved prior to business use. Currently, in cases where such model's materiality is "Medium" or "High," such Model Validation is reviewed by the MRGC and recommended by the MRGC to MRC, for approval.

As stated above, the proposed rule change would redefine the first and second line responsibilities and incentives relating to model performance monitoring and oversight.

With respect to the first line, the proposed rule change would remove a reference to the Financial Engineering Unit ("FEU") within Quantitative Risk Management ("QRM"). QRM is a risk management function within the Group Chief Risk Office, and a representative of QRM is the Model Owner for all margin Models used by the CCPs under the Standards for Covered Clearing Agencies ("Standards") under the Securities Exchange Act of 1934. Because the Model Owner resides in QRM, QRM is responsible for developing, testing, and signing-off on new models and enhancements to existing models before submitting any such model to MVC for Model Validation and approval. Due to an organizational restructuring, FEU was eliminated, and pursuant to the proposed rule change, the responsibilities of FEU described above would vest in

the Model Owners, who as described with respect to the proposed changes to Section 3.1 above, would have responsibility for the models.

With respect to the second line, the proposed rule change would revise this section to remove the requirement that MRC approve any Model Validation. In this regard, MVC would have the sole and exclusive authority to approve a model. As stated above, the Clearing Agencies' believe that the MVC is best suited to address Model Validation issues based on its quantitative and technical expertise and knowledge, and the section would be revised accordingly to reflect MVC's proposed role in this regard. As such, the proposed rule change would remove any text that indicates that MRC approval is required for any Model Validation to be complete and/or for a model to remain in production.

Also, consistent with the change in the role of MRGC from one of oversight to instead acting in an advisory capacity, as described above, the proposed rule change would also remove text indicating that MRGC would review and recommend Model Validations to MRC or have any role in provisional approvals¹⁴ of models.

Section 3.8 – Model Performance Monitoring

Pursuant to the Framework, MVC is currently responsible for model performance monitoring and for each Clearing Agency's backtesting process, which are integral parts of each Clearing Agency's model risk management framework. In this regard, Section 3.8 (Model Performance Monitoring) of the Framework states that model performance monitoring is the process of (i) evaluating an active model's ongoing performance based on theoretical tests, (ii) monitoring the model's parameters through the use of threshold indicators, and/or (iii) backtesting using actual historical data/realizations to test a Value-at-Risk ("VaR") model's predictive power.

The proposed rule change would eliminate references to "theoretical tests" and "threshold indicators" and "historical data/realizations" to represent a real-world depiction of the model performance monitoring process. These changes are being proposed because the process of model performance monitoring does not always take into account theoretical tests, threshold indicators, and/or historical data/realizations, but "could" take some or all of these into account and appropriate under the circumstances. Therefore, the elimination of the ties to these tests, thresholds and use of historical data/realizations are a more accurate representation of the model performance monitoring process.

¹⁴ In this regard, Section 3.6 that states that models may be provisionally approved by MVC for a limited period, not to exceed six months unless also approved by the MRGC, would be revised to delete the reference to MRGC's role. Consistent with the changes relating to the second line as described above, MVC would assume full responsibility for provisional approvals and, and consistent with text in Section 3.6, would continue to track all provisional approvals to confirm provisional periods and control measures are met.

In addition, Section 3.8 would be revised to reflect changes to the roles of Model Owners and the MVC consistent with the roles of the first and second lines described above, and add text stating that Model Owners are responsible for the design and execution of model performance monitoring and preparation of model performance monitoring reports. The proposed text would also state that MVC is responsible for providing oversight of model performance monitoring activities by setting organizational standards and providing critical analysis for identifying Model issues and/or limitations.¹⁵

One paragraph within Section 3.8 contains a statement that MVC is responsible for model performance monitoring, including review of risk-based models used to calculate margin requirements and relevant parameters/threshold indicators, sensitivity analysis, and model backtesting results, and preparation of related reports. It also states that review of these model performance measures is subject to review by MRGC. To remain consistent with the change in the role of MRGC and the related consolidation of primary responsibility for oversight in the model governance process in MVC, as described above, this paragraph would be deleted.

Also, consistent with the shift of the responsibility in this regard to Model Owners, Section 3.8 would be clarified to indicate that QRM, because the Model Owner for all margin models used by the CCPs under the Standards would reside in QRM, would be responsible for model performance monitoring the CCP's margin models

Section 3.9 – Backtesting

Section 3.9 states that MVC is responsible for each Clearing Agency's VaR backtesting processes for the central counterparties, including for model backtesting and Clearing Fund Requirement ("CFR") backtesting. Consistent with the changes described above, this section would be revised to state that this backtesting function for models and CFR would reside with QRM, as it is the owner of margin models and would be responsible for performance monitoring functions with respect to margin models.

Section 4.1 – Board of Directors and Senior Management Reporting

Section 4.1 describes MRGC as the primary forum for MVC's regular reporting of Model Validation activities and material Model Risks identified through regular Model performance monitoring. Reports and recommendations with respect to Model Risk management are made to the MRC as described in Section 3.

Periodic reporting to the Risk Committee of the Clearing Agencies' Boards ("BRC") regarding Model Risk matters may include:

- Updates of Model Validation findings and the status of annual validations.

¹⁵ The organizational standards apply to DTCC's subsidiaries, as applicable.

- Updates on significant Model Risk matters, and on compliance matters with respect to Model Risk policies and procedures (including this Framework).
- Escalation of Model Risk matters as set forth in the Market Risk Tolerance Statement, and subsequent, regular updates with respect thereto.

The proposed rule change would revise Section 4.1 to reflect the changes to the roles of MVC and MRGC as described above. In this regard, the proposed rule change would delete the description of MRGC's role as it would no longer have oversight of Model Validation and model performance monitoring and would add MRC as a recipient of periodic reporting. The proposed rule change would also generalize the statement relating to escalation of matters as set forth in the Market Risk Tolerance Statement to instead refer to "the Risk Tolerance Statements" to reflect the addition of a reference to the Model Risk Tolerance Statement as a supporting document for the Framework, as more fully described below.

Section 4.2 – Escalation

Section 4.2 describes, among other things, how on at least a monthly basis, the key metrics identified in Section 3.9 (Backtesting) are reviewed by the Market and Liquidity Risk Management unit within the Group Chief Risk Office and MVC and reported to MRC. Given MVC's reduced role with respect to backtesting in this regard, the proposed rule change would eliminate the provision that MVC would review the metrics.¹⁶

The proposed rule change would also revise text for clarity and readability with respect to statements on the review of the Market Risk Tolerance Statement, to reference "Risk Tolerance Statements" more generally to reflect the changes described herein. Also, the proposed rule change would remove MRGC's role in review and approval of changes to backtesting methodology and instead vest that responsibility with MVC, to reflect the change in oversight of Model Validation from MRGC to MVC.

Also, to enhance the readability and flow of the text in this section, the proposed rule change would move text describing that (i) the review of the Risk Tolerance Statements by the Managing Director of the Market and Liquidity Risk Management unit ("MDMLRM") within the Group Chief Risk Office will occur on an at least annual basis, and (ii) the BRC's review and approval of the Risk Tolerance Statements will occur on an at least annual basis, to the end of Section 4.2.¹⁷ The proposed change would also replace the reference to specific title of the

¹⁶ Text would be added to clarify that the risk metrics are reported to MRC by the group within Group Chief Risk Office responsible for risk reporting. Currently, this function is known as Risk Reporting.

¹⁷ The Risk Tolerance Statements are also reviewed on an at least annual basis by Operational Risk Management, which, among other things, is the business line responsible for enabling the identification of the Clearing Agencies' plausible sources of operational risk in order to mitigate the impact of a potential event related to those

MDMLRM to instead refer to the owner of the Risk Tolerance Statements, to provide for more generic terminology that would not require formal amendment in the Framework if the title of the MDMLRM were to change.

Other Changes

The Framework inconsistently uses the term “model” without and with initial capitalization, but currently refers throughout to the risks relating to models referred to in the Framework as a defined term using initial capitalization -- “Model Risk.” To remain consistent with the usage of “model” throughout the Framework, NSCC would conform all references to the term “model”, so they appear without initial capitalization and change references to Model Risk throughout the Framework to eliminate the initial capitalization of the term and refer to it as “model risk.”

The Executive Summary of the Framework includes a description of internal DTCC policies and procedures that support the Framework, including the (a) DTCC Model Risk Management Policy, (b) DTCC Model Validation Procedures, (c) DTCC Model Performance Monitoring Procedures, (d) the DTCC Backtesting Procedures and (e) Market Risk Tolerance Statement (“Related Procedures”). In addition to the policies and procedures described in the Executive Summary, the proposed rule change would list in the Executive Summary as a supporting policy, the Model Risk Tolerance Statement. The Model Risk Tolerance Statement articulates, among other things, risk tolerance levels covering model design and implementation, including consideration of a model’s intended purpose and/or its adequacy of performance. The conclusion, based on risk tolerance levels, focuses on model remediation.

Since the risk tolerance levels in both the Market Risk Tolerance Statement¹⁸ and the Model Risk Tolerance Statement consider model remediation as the basis of risk control, both are applicable to the Framework. In this regard, the proposed rule change would add a footnote after the listing of the Model Risk Tolerance Statement and the existing reference to the Market Risk Tolerance Statement to describe that with respect to the key risks¹⁹ of model risk and market risk, each risk tolerance statement documents the overall risk reduction or mitigation objectives as it relates to model risk and market risk activities and documents the risk controls and other measures used to manage such activities, including escalation requirements in the

sources using tailored risk profiles and monitoring risk profiles in accordance with the relevant Risk Tolerance Statements.

¹⁸ The Market Risk Tolerance Statement articulates, among other things, risk tolerance levels covering margin backtests covering backtest coverage and stress tests covering exposure to extreme market moves. The conclusion, based on tolerance levels, focuses on model enhancement or model remediation, as applicable.

¹⁹ DTCC has identified a set of key risks to better guide the content, measurement, frequency, and focus of our discussion and management of risk generally across the Organization.

event of risk metric breaches. The footnote would also state that the Risk Tolerance Statements are reviewed, revised, retired, and/or replaced, as the case may be, and approved by the BRC (as defined herein) annually, based upon the circumstances, and the reasonable best judgement of management, then existing relating to model risk management matters. Consistent with proposed terminology described above with respect to Sections 4.1 and 4.2, the Model Risk Tolerance Statement and the Market Risk Tolerance Statement would be referred to collectively in the Executive Summary as the “Risk Tolerance Statements.”

The Executive Summary also indicates that the Related Procedures may be updated or amended. The Clearing Agencies regularly review their internal policies and procedures, and in addition to updating or amending them as an administrative matter as they deem appropriate, may also retire or replace internal policies and procedures as they deem appropriate. In this regard, the proposed rule change would also include text to the effect that each of the Related Procedures and the Model Risk Tolerance Statement may retired or replaced (in addition to updated or amended).

Effective Date

The proposed rule change would become effective upon approval by the Commission.

(b) Statutory Basis

The Clearing Agencies believe that the Framework is consistent with Section 17A(b)(3)(F) of the Act,²⁰ as well as Rule 17Ad-22 (e)(4)(vii), and (e)(7)(vii) thereunder,²¹ for the reasons described below.

Section 17A(b)(3)(F) of the Act²² requires, *inter alia*, that the rules of a clearing agency be designed to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible. As described above, the Framework describes the process by which the Clearing Agencies identify, measure, monitor, and manage the risks associated with the design, development, implementation, use, and validation of quantitative models. The quantitative models covered by the Framework are applied by the Clearing Agencies, as applicable, to evaluate and address their respective risk exposures associated with their settlement activity and facilitate their ability to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible. In this regard, the proposed changes to the Framework support their ability to develop models that are applied to evaluate and address risk exposure and facilitate the safeguarding of securities and funds which are in the custody or control of the Clearing Agencies or for which they are responsible by (i) changing the governance structure for approval of a

²⁰ 15 U.S.C. 78q-1(b)(3)(F).

²¹ Supra note 4.

²² 15 U.S.C. 78q-1(b)(3)(F).

Model Validation to transfer the responsibility for approval of model validations to the MVC, which is composed of individuals with a higher level of expertise relating to model validations than members of the MRC, which is currently responsible for such approvals, thereby enhancing the ability of the group conducting Model Validations to evaluate risk exposures relating to models, (ii) incorporating the Model Risk Tolerance Statement into the Framework which describes risk tolerance levels covering model design and implementation, including consideration of a model's intended purpose and/or its adequacy of performance, and therefore including a cross-reference to a document which describes an important gauge with respect to the level of risk that may be tolerated as part of managing the risk presented to the Clearing Agencies relating to models, (iii) clarifying the definition of Model Owner, therefore defining the first line responsible for evaluating risk exposure, (iv) reflecting changes in the role of the Model Risk Governance Committee and a change its name, which relates to the change in governance structure that is designed to enhance the independence in its new role of responsibility for approval of Model Validations which would support the Clearing Agencies' ability to evaluate risk exposure, (v) redefining the first and second line responsibilities and incentives relating to model performance monitoring and oversight, therefore enhancing the process by which risk relating to models is evaluated, and (vi) making other technical and clarifying changes to the text, as described above, to improve the text in defining roles and responsibilities for the processes established by the Clearing Agencies to monitor risk. Therefore, NSCC believes the proposed rule change is consistent with the requirements of Section 17A(b)(3)(F) of the Act,²³ because it would facilitate the ability of the Clearing Agencies to continue to develop models that are applied to evaluate and address risk exposure and allow them to maintain a Framework that facilitates the ability of the Clearing Agencies to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible, as described above.

Rule 17Ad-22(e)(4)(vii)²⁴ and (e)(7)(vii)²⁵ under the Act requires, inter alia, that a covered clearing agency establish, implement, maintain and enforce written policies and procedures reasonably designed to perform Model Validations on its credit risk models and liquidity risk models not less than annually or more frequently as may be contemplated by the clearing agency's risk management framework established pursuant to Rule 17Ad-22(e)(3).²⁶ As discussed above, the proposed rule change would amend the Framework to provide for enhanced clarity in the text and enhanced efficiency with respect to the approval process for Model

²³ Id.

²⁴ 17 CFR 240.17Ad-22(e)(4) (in particular, 17 C.F.R. 240.17Ad-22(e)(4)(vii)). See supra note 4.

²⁵ 17 CFR 240.17Ad-22(e)(7) (in particular, 17 C.F.R. 240.17Ad-22(e)(7)(vii)). See supra note 4.

²⁶ 17 CFR 240.17Ad-22(e)(3). See supra note 4.

Validations at least annually. In this regard, and as noted above, pursuant to the Framework, Model Validations are performed not less than annually on its credit risk models and liquidity risk models. Therefore, the Clearing Agencies believe that the proposed changes to the Framework are consistent with Rule 17Ad-22(e)(4)(vii)²⁷ and (e)(7)(vii)²⁸ under the Act.

4. Self-Regulatory Organization's Statement on Burden on Competition

None of the Clearing Agencies believe that the Framework would have any impact, or impose any burden, on competition because the proposed rule change reflects clarifying changes and provides for a more efficient internal governance process and would not effectuate any changes to the Clearing Agencies' model risk management tools as they currently apply to their respective Members or Participants.

5. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

The Clearing Agencies have not solicited or received any written comments relating to this proposal. The Clearing Agencies will notify the Commission of any written comments received by the Clearing Agencies.

6. Extension of Time Period for Commission Action

Not applicable.

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)

(a) Not applicable.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable.

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

While the proposed rule change is not based on the rules of another self-regulatory organization or of the Commission, the Framework is applicable to each of the Clearing

²⁷ Supra note 4.

²⁸ Supra note 4.

Agencies, and each of the Clearing Agencies has filed similar proposed rule changes concurrently with this filing.

9. Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act

Not applicable.

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

Not applicable.

11. Exhibits

Exhibit 1 – Not applicable.

Exhibit 1A – Notice of proposed rule change for publication in the Federal Register.

Exhibit 2 – Not applicable.

Exhibit 3 – (a) Risk Tolerance Statements; (b) Model Risk Management Policy; (c) Model Validation Procedures; (d) Model Performance Monitoring Procedures; and (e) Backtesting Procedures. **Omitted and filed separately with the Commission. Confidential treatment of this Exhibit 3 is requested by each of the Clearing Agencies pursuant to 17 CFR 240.24b-2.**

Exhibit 4 – Not applicable.

Exhibit 5 – Clearing Agency Model Risk Management Framework. **Omitted and filed separately with the Commission. Confidential treatment of this Exhibit 5 is requested by each of the Clearing Agencies pursuant to 17 CFR 240.24b-2.**

EXHIBIT 1A

SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-[_____]; File No. SR-NSCC-2020-008)

[DATE]

Self-Regulatory Organizations; National Securities Clearing Corporation; Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Modify the Clearing Agency Model Risk Management Framework

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 _____, 2020, National Securities Clearing Corporation (“NSCC”) 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 by the clearing agency. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

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

(a) The proposed rule change of NSCC would amend the Clearing Agency Model Risk Management Framework (“Framework”) of NSCC and its affiliates The Depository Trust Company (“DTC”) and Fixed Income Clearing Corporation (“FICC,” and FICC together with NSCC, the “CCPs,” and the CCPs together with DTC, the “Clearing Agencies”).³ Specifically, the proposed rule change would amend the

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

³ The Framework sets forth the model risk management practices adopted by the Clearing Agencies, which have been designed to assist the Clearing Agencies in identifying, measuring, monitoring, and managing the risks associated with the design, development, implementation, use, and validation of quantitative models.

Framework to (i) change the governance structure for approval of a model⁴ validation (“Model Validation”), (ii) incorporate a model risk tolerance statement (“Model Risk Tolerance Statement”) and related provisions, (iii) clarify the definition of Model Owner (as defined below), (iv) reflect changes in the role of the Model Risk Governance Committee and a change of its name, (v) redefine the first and second line responsibilities and incentives relating to model performance monitoring and oversight and (vi) make other technical and clarifying changes to the text, as more fully described below.

Although the Clearing Agencies consider the Framework to be a rule, the proposed rule change does not require any changes to the Rules, By-Laws and Organization Certificate of DTC (“DTC Rules”), the Rulebook of the Government Securities Division (“GSD”) of Fixed Income Clearing Corporation (such Rulebook

See Securities Exchange Act Release No. 81485 (August 25, 2017), 82 FR 41433 (August 31, 2017) (File Nos. SR-DTC-2017-008; SR-FICC-2017-014; SR-NSCC-2017-008) (“2017 Notice”). The Framework is managed by the Clearing Agencies’ risk management areas generally responsible for model validation and control matters, DTCC Model Validation and Control (“MVC”), on behalf of each Clearing Agency, with review and oversight by senior management and the Risk Committee of the Board of Directors of each of DTC, FICC, and NSCC (collectively, “Boards”). See Id.

⁴ The Clearing Agencies have adopted the following definition for the term “model”: “[M]odel” refers to a quantitative method, system, or approach that applies statistical, economic, financial, or mathematical theories, techniques, and assumptions to process input data into quantitative estimates. A “model” consists of three components: an information input component, which delivers assumptions and data to the model; a processing component, which transforms inputs into estimates; and a reporting component, which translates the estimates into useful business information. The definition of “model” also covers quantitative approaches whose inputs are partially or wholly qualitative or based on expert judgment, provided that the output is quantitative in nature. See Supervisory Guidance on Model Risk Management, SR Letter 11-7, dated April 4, 2011, issued by the Board of Governors of the Federal Reserve System and the Office of the Comptroller of the Currency, at 3.

hereinafter referred to as “GSD Rules”), the Clearing Rules of the Mortgage-Backed Securities Division (“MBSD”) of Fixed Income Clearing Corporation (“such Clearing Rules hereinafter referred to as “MBSD Rules”), or the Rules & Procedures of NSCC (“NSCC Rules”), as the Framework would be a standalone document.⁵

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

In its filing with the Commission, the clearing agency 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. The clearing agency has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

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

1. Purpose

The proposed rule change would amend the Framework to (i) change the governance structure for approval of a Model Validation, (ii) incorporate the Model Risk Tolerance Statement with respect to related forward-looking provisions associated with maintaining multiple model risk-related tolerance statements, (iii) clarify the definition of Model Owner, (iv) reflect changes in the role of the Model Risk Governance Committee and a change of its name, (v) redefine the first and second line responsibilities and incentives relating to model performance

⁵ Capitalized terms not defined herein are defined in the DTC Rules, NSCC Rules, GSD Rules or MBSD Rules, as applicable, available at <http://dtcc.com/legal/rules-and-procedures>.

monitoring and oversight and (vi) make other technical and clarifying changes to the text, as more fully described below.

Although the Clearing Agencies consider the Framework to be a rule, the proposed rule change does not require any changes to the DTC Rules, GSD Rules, MBSD Rules, or NSCC Rules, as the Framework would be a standalone document.

Background

The Framework is maintained by the Clearing Agencies for compliance with Rule 17Ad-22 (e)(4)(i), (e)(4)(vii), (e)(6)(iii), (e)(6)(vi), (e)(6)(vii), and (e)(7)(vii) under the Act⁶, and sets forth the model risk management practices adopted by the Clearing Agencies, which have been designed to assist the Clearing Agencies in identifying, measuring, monitoring, and managing the risks associated with the design, development, implementation, use, and validation of quantitative models. The Framework is managed by MVC, on behalf of each Clearing Agency, with review and oversight by senior management of each Clearing Agency and the Boards.⁷

Pursuant to the Framework, a model developed for use by any of the Clearing Agencies and meeting the above definition for the term “model” is included and tracked within a model inventory (“Model Inventory”) maintained by MVC.⁸

⁶ 17 CFR 240.17Ad-22 (e)(4)(i), (e)(4)(vii), (e)(6)(iii), (e)(6)(vi), (e)(6)(vii), and (e)(7)(vii). Each of DTC, NSCC and FICC is a “covered clearing agency” as defined in Rule 17Ad-22(a)(5) and must comply with subsection (e) of Rule 17Ad-22. References to Rule 17Ad-22(e)(6) and its subparagraphs cited herein, and compliance therewith, apply to the CCPs only and do not apply to DTC.

⁷ The parent company of the Clearing Agencies is The Depository Trust & Clearing Corporation (“DTCC”). DTCC operates on a shared services model with respect to the Clearing Agencies. Most corporate functions are established and managed on an enterprise-wide basis pursuant to intercompany agreements under which it is generally DTCC that provides a relevant service to a Clearing Agency.

⁸ See 2017 Notice, supra note 3.

As Model Validation and the process for approval of Model Validations is a key concept that flows through the Framework, NSCC is providing the following background regarding Model Validation to supplement the proposed rule changes discussed further below.

Model Validation

Pursuant to Section 3.3 (Full Model Validation) of the Framework, each new model undergoes a Model Validation (unless provisionally approved, as discussed below) pursuant to which MVC verifies that the model is performing as expected in accordance with its design objectives and business purpose. The Model Validation standards, referred to in the Framework as the full Model Validation standards for any new model include, but are not be limited to, the following core Model Validation activities, as listed in the Framework:

- evaluation of the model development documentation and testing;
- evaluation of model theory and assumptions, and identification of potential limitations;
- evaluation of data inputs and parameters;
- review of numerical implementation including replication for certain key model components, which would vary from model to model;
- independent testing: sensitivity analysis, stress testing, and benchmarking, as appropriate; and
- evaluation of model outputs, model performance, and back testing.

Pursuant to the Framework, Full Model Validation is applied under the following circumstances: (i) for all new models prior to their use in production; (ii) during periodic Model Validations (as described below); and (iii) when model changes are made that require independent Model Validation (as further described below).

Pursuant to Section 3.4 (Periodic Model Validation) of the Framework, models approved for use in production are subject to what is currently referred to in the Framework as periodic

Model Validations for purposes of confirming that the models continue to operate as intended, identifying any deficiencies that would call into question the continuing validity of any such model's original approval and evaluating whether the model and its prior validation remain valid within the dynamics of current market conditions.

In this regard, the Framework describes that MVC performs a Model Validation for each model approved for use in production not less than annually (or more frequently as may be contemplated by such Clearing Agency's established risk management framework), including each credit risk model,⁹ liquidity risk model,¹⁰ and in the case of FICC and NSCC, as central counterparties, on their margin systems and related models.¹¹

Periodic Model Validations and a full Model Validation follow identical standards. The Framework states that in certain cases, MVC may determine extra Model Validation activities are warranted based on previous Model Validation work and findings, changes in market conditions, or because performance monitoring of a model warrants extra validation.

Pursuant to the Framework all findings that result from a new Model Validation, a change Model Validation, a periodic Model Validation, or in connection with implementation of a new model or model change, are centrally tracked by MVC.

Proposed Rule Changes

Section 3.1 Model Inventory

Section 3.1 of the Framework currently explains how any model developed for use by any of the Clearing Agencies and meeting the above definition for the term "model" would be subject to tracking within the Model Inventory. MVC is charged with responsibility for adding

⁹ See Rule 17Ad-22(e)(4)(vii). See supra note 6.

¹⁰ See Rule 17Ad-22(e)(7)(vii). See supra note 6.

¹¹ See Rule 17Ad-22(e)(6)(vi) and (vii). See supra note 6.

models to the Model Inventory and for tracking models listed in the Model Inventory.

Section 3.1 also describes how a Model Inventory survey is conducted at least annually across the Clearing Agencies to confirm the Model Inventory is current. During the Annual Model Inventory Survey, any business area or support function intending to have a model developed for Clearing Agency use will submit materials relevant to such proposed model for MVC to review and assess whether such proposed model will be added to the Model Inventory.

Proposed Change to Enhance Flow and Readability of Text

Pursuant to the proposed rule change, NSCC would remove the use of the modifier “Clearing Agency” with respect to references to models in this section and throughout the Framework. The Framework relates solely to models of the Clearing Agencies and the use of this modifier is redundant. This change would enhance the flow and readability of the text by eliminating a redundancy.

Model Owner

Also, the proposed rule change would move the first reference to the defined term “Model Owner” from the last paragraph of the section to the second paragraph of the section and clarify the meaning of the term. This reference would appear in a new sentence that would describe that a Model Owner is the person designated by the applicable business area or support function to be responsible for a particular model, and that the Model Owner is recorded as the Model Owner for such model by MVC in the Model Inventory. The Framework currently describes the Model Owner as responsible for the development or operation of the model being validated by MVC, without noting that the Model Owner is an individual designated by the applicable business unit or support function. In this regard, the proposed change would provide clarification that an individual is designated as the Model Owner by the applicable business area or support function.

The proposed rule change would also change the Clearing Agency title of the individual that is the head of MVC that is referred to in a footnote in this section from being an Executive

Director to Managing Director of each Clearing Agency to reflect that a more senior officer of the Clearing Agencies would be responsible for supervising the MVC.¹² The footnote also states that the head of MVC reports to the Group Chief Risk Officer¹³ rather than to any Model Owner.¹⁴ This statement would be amended to clarify the independence of the MVC extends so that it is independent from anyone who develops and operates a model and not only a Model Owner. Also relating to the status of the head of MVC within the governance structure of the Clearing Agencies, this footnote would note that the head of MVC is a member of the Management Risk Committee (“MRC”).

Replacement of Term “Vendor” with “externally purchased”

Section 3.1 currently contains a paragraph which describes that all models, whether internally developed or purchased from a “vendor,” are subject to Model Validation. Pursuant to the proposed rule change, NSCC would revise the text of this paragraph to replace the term “vendor” with “externally purchased.” NSCC believes use of the term “externally purchased”, rather than vendor, would provide clarity with respect to sections of the Framework that apply to models developed internally versus externally.

Section 3.2 Model Materiality and Complexity

Section 3.2 of the Framework outlines that MVC assigns a materiality rating and a complexity rating to each model after it is added to the Model Inventory and describes that the applicable rating impacts the model’s validation in terms of prioritization and approval authority.

¹² A Managing Director is senior to an Executive Director.

¹³ The Clearing Agencies’ Model Risk management standards and practices are subject to the oversight and direction of the Group Chief Risk Officer, who is the head of the Group Chief Risk Office.

¹⁴ The purpose of the footnote is to make clear that MVC management has an independent reporting line to the Group Chief Risk Office, without potential conflict of reporting to any person that could be a Model Owner.

As more fully described below regarding Section 3.6 of the Framework, the proposed rule change would provide for the delegation of approval authority for all Model Validations from the Clearing Agencies' management level committee responsible for model risk management matters to MVC, and the authority to approve model validations would vest solely in MVC.¹⁵

In this regard, a materiality rating and complexity rating would no longer be determinative of approval authority and the text that describes approval authority as impacted by materiality and complexity ratings would be deleted.

As a related change in the model governance structure, the forum currently referred to as the Model Risk Governance Committee would no longer maintain oversight authority in the model validation process and the text in this section would reflect that it is the forum for review of Model Risk matters rather than the formal forum for addressing Model Risk matters. The Model Risk Governance Committee's name would be revised in this section and throughout to refer to it instead as the Model Risk Governance Council ("MRGC") to reflect its proposed role as an advisory body rather than being part of the formal model governance process. In this regard, the text of Section 3.2 would be revised to reflect that the MRGC is a forum for review of, rather than addressing, Model Risk matters and a footnote would be added to state that MRGC is an advisory body that has no decision-making authority but would discuss and/or review certain model risk related matters which could result in advice and/or recommendation, which is generally directed to the interested party of a given model that brings the matter, as applicable.

¹⁵ Currently, Model Validations that have a materiality rating of 'Medium' or 'High,' must be approved by the MRC, after the model has been reviewed and recommended to the MRC for approval by the MRGC. Additionally, all periodic Model Validations must currently be approved by the MRC to be deemed complete through review and recommendation by the MRGC.

The proposed change to shift responsibility for Model Risk matters, including approval of Model Validations, to MVC would ensure that MVC has sole responsibility for approving Model Validations, as MVC is best suited within the Clearing Agencies to manage the quantitative and technical expertise to carry out the related functions.

Section 3.5 - Model Change Management

Section 3.5 (Model Change Management) currently states that an active model may require changes in either structure or technique. Details for any model change request are provided to MVC for review and a determination of whether full Model Validation is required. This section also includes text that states to the extent that a vendor's version change may impact any existing model used in production, an impact study of the version change along with any other analysis/benchmarking shall be conducted as appropriate in MVC's reasonable business discretion.

The process described in this section will not be amended pursuant to the proposed rule change, however, to remain consistent with the use of terminology as described with respect to Section 3.1 above, references to "vendor" models in this section would be revised to reflect that models not developed by the Clearing Agencies would instead be referred to as externally purchased.

Section 3.6 - Model Approval and Control

Section 3.6 (Model Approval and Control) currently provides that all new models, and all material changes to existing models, undergo Model Validation by MVC and must be approved prior to business use. Currently, in cases where such model's materiality is "Medium" or "High," such Model Validation is reviewed by the MRGC and recommended by the MRGC to MRC, for approval.

As stated above, the proposed rule change would redefine the first and second line responsibilities and incentives relating to model performance monitoring and oversight.

With respect to the first line, the proposed rule change would remove a reference to the Financial Engineering Unit (“FEU”) within Quantitative Risk Management (“QRM”). QRM is a risk management function within the Group Chief Risk Office, and a representative of QRM is the Model Owner for all margin Models used by the CCPs under the Standards for Covered Clearing Agencies (“Standards”) under the Securities Exchange Act of 1934. Because the Model Owner resides in QRM, QRM is responsible for developing, testing, and signing-off on new models and enhancements to existing models before submitting any such model to MVC for Model Validation and approval. Due to an organizational restructuring, FEU was eliminated, and pursuant to the proposed rule change, the responsibilities of FEU described above would vest in the Model Owners, who as described with respect to the proposed changes to Section 3.1 above, would have responsibility for the models.

With respect to the second line, the proposed rule change would revise this section to remove the requirement that MRC approve any Model Validation. In this regard, MVC would have the sole and exclusive authority to approve a model. As stated above, the Clearing Agencies’ believe that the MVC is best suited to address Model Validation issues based on its quantitative and technical expertise and knowledge, and the section would be revised accordingly to reflect MVC’s proposed role in this regard. As such, the proposed rule change would remove any text that indicates that MRC approval is required for any Model Validation to be complete and/or for a model to remain in production.

Also, consistent with the change in the role of MRGC from one of oversight to instead acting in an advisory capacity, as described above, the proposed rule change would also remove

text indicating that MRGC would review and recommend Model Validations to MRC or have any role in provisional approvals¹⁶ of models.

Section 3.8 – Model Performance Monitoring

Pursuant to the Framework, MVC is currently responsible for model performance monitoring and for each Clearing Agency’s backtesting process, which are integral parts of each Clearing Agency’s model risk management framework. In this regard, Section 3.8 (Model Performance Monitoring) of the Framework states that model performance monitoring is the process of (i) evaluating an active model’s ongoing performance based on theoretical tests, (ii) monitoring the model’s parameters through the use of threshold indicators, and/or (iii) backtesting using actual historical data/realizations to test a Value-at-Risk (“VaR”) model’s predictive power.

The proposed rule change would eliminate references to “theoretical tests” and “threshold indicators” and “historical data/realizations” to represent a real-world depiction of the model performance monitoring process. These changes are being proposed because the process of model performance monitoring does not always take into account theoretical tests, threshold indicators, and/or historical data/realizations, but “could” take some or all of these into account and appropriate under the circumstances. Therefore, the elimination of the ties to these tests, thresholds and use of historical

¹⁶ In this regard, Section 3.6 that states that models may be provisionally approved by MVC for a limited period, not to exceed six months unless also approved by the MRGC, would be revised to delete the reference to MRGC’s role. Consistent with the changes relating to the second line as described above, MVC would assume full responsibility for provisional approvals and, and consistent with text in Section 3.6, would continue to track all provisional approvals to confirm provisional periods and control measures are met.

data/realizations are a more accurate representation of the model performance monitoring process.

In addition, Section 3.8 would be revised to reflect changes to the roles of Model Owners and the MVC consistent with the roles of the first and second lines described above, and add text stating that Model Owners are responsible for the design and execution of model performance monitoring and preparation of model performance monitoring reports. The proposed text would also state that MVC is responsible for providing oversight of model performance monitoring activities by setting organizational standards and providing critical analysis for identifying Model issues and/or limitations.¹⁷

One paragraph within Section 3.8 contains a statement that MVC is responsible for model performance monitoring, including review of risk-based models used to calculate margin requirements and relevant parameters/threshold indicators, sensitivity analysis, and model backtesting results, and preparation of related reports. It also states that review of these model performance measures is subject to review by MRGC. To remain consistent with the change in the role of MRGC and the related consolidation of primary responsibility for oversight in the model governance process in MVC, as described above, this paragraph would be deleted.

Also, consistent with the shift of the responsibility in this regard to Model Owners, Section 3.8 would be clarified to indicate that QRM, because the Model Owner for all margin models used by the CCPs under the Standards would reside in QRM, would be responsible for model performance monitoring the CCP's margin models

Section 3.9 – Backtesting

Section 3.9 states that MVC is responsible for each Clearing Agency's VaR backtesting processes for the central counterparties, including for model backtesting and Clearing Fund

¹⁷ The organizational standards apply to DTCC's subsidiaries, as applicable.

Requirement (“CFR”) backtesting. Consistent with the changes described above, this section would be revised to state that this backtesting function for models and CFR would reside with QRM, as it is the owner of margin models and would be responsible for performance monitoring functions with respect to margin models.

Section 4.1 – Board of Directors and Senior Management Reporting

Section 4.1 describes MRGC as the primary forum for MVC’s regular reporting of Model Validation activities and material Model Risks identified through regular Model performance monitoring. Reports and recommendations with respect to Model Risk management are made to the MRC as described in Section 3.

Periodic reporting to the Risk Committee of the Clearing Agencies’ Boards (“BRC”) regarding Model Risk matters may include:

- Updates of Model Validation findings and the status of annual validations.
- Updates on significant Model Risk matters, and on compliance matters with respect to Model Risk policies and procedures (including this Framework).
- Escalation of Model Risk matters as set forth in the Market Risk Tolerance Statement, and subsequent, regular updates with respect thereto.

The proposed rule change would revise Section 4.1 to reflect the changes to the roles of MVC and MRGC as described above. In this regard, the proposed rule change would delete the description of MRGC’s role as it would no longer have oversight of Model Validation and model performance monitoring and would add MRC as a recipient of periodic reporting. The proposed rule change would also generalize the statement relating to escalation of matters as set forth in the Market Risk Tolerance Statement to instead refer to “the Risk Tolerance Statements” to reflect the addition of a reference to the Model Risk Tolerance Statement as a supporting document for the Framework, as more fully described below.

Section 4.2 – Escalation

Section 4.2 describes, among other things, how on at least a monthly basis, the key metrics identified in Section 3.9 (Backtesting) are reviewed by the Market and Liquidity Risk Management unit within the Group Chief Risk Office and MVC and reported to MRC. Given MVC's reduced role with respect to backtesting in this regard, the proposed rule change would eliminate the provision that MVC would review the metrics.¹⁸

The proposed rule change would also revise text for clarity and readability with respect to statements on the review of the Market Risk Tolerance Statement, to reference "Risk Tolerance Statements" more generally to reflect the changes described herein. Also, the proposed rule change would remove MRGC's role in review and approval of changes to backtesting methodology and instead vest that responsibility with MVC, to reflect the change in oversight of Model Validation from MRGC to MVC.

Also, to enhance the readability and flow of the text in this section, the proposed rule change would move text describing that (i) the review of the Risk Tolerance Statements by the Managing Director of the Market and Liquidity Risk Management unit ("MDMLRM") within the Group Chief Risk Office will occur on an at least annual basis, and (ii) the BRC's review and approval of the Risk Tolerance Statements will occur on an at least annual basis, to the end of Section 4.2.¹⁹ The proposed change would also

¹⁸ Text would be added to clarify that the risk metrics are reported to MRC by the group within Group Chief Risk Office responsible for risk reporting. Currently, this function is known as Risk Reporting.

¹⁹ The Risk Tolerance Statements are also reviewed on an at least annual basis by Operational Risk Management, which, among other things, is the business line responsible for enabling the identification of the Clearing Agencies' plausible sources of operational risk in order to mitigate the impact of a potential event related to those sources using tailored risk profiles and monitoring risk profiles in accordance with the relevant Risk Tolerance Statements.

replace the reference to specific title of the MDMLRM to instead refer to the owner of the Risk Tolerance Statements, to provide for more generic terminology that would not require formal amendment in the Framework if the title of the MDMLRM were to change.

Other Changes

The Framework inconsistently uses the term “model” without and with initial capitalization, but currently refers throughout to the risks relating to models referred to in the Framework as a defined term using initial capitalization -- “Model Risk.” To remain consistent with the usage of “model” throughout the Framework, NSCC would conform all references to the term “model”, so they appear without initial capitalization and change references to Model Risk throughout the Framework to eliminate the initial capitalization of the term and refer to it as “model risk.”

The Executive Summary of the Framework includes a description of internal DTCC policies and procedures that support the Framework, including the (a) DTCC Model Risk Management Policy, (b) DTCC Model Validation Procedures, (c) DTCC Model Risk Performance Monitoring Procedures, (d) the DTCC Backtesting Procedures and (e) Market Risk Tolerance Statement (“Related Procedures”). In addition to the policies and procedures described in the Executive Summary, the proposed rule change would list in the Executive Summary as a supporting policy, the Model Risk Tolerance Statement. The Model Risk Tolerance Statement articulates, among other things, risk tolerance levels covering model design and implementation, including consideration of a model’s intended purpose and/or its adequacy of performance. The conclusion, based on risk tolerance levels, focuses on model remediation.

Since the risk tolerance levels in both the Market Risk Tolerance Statement²⁰ and the Model Risk Tolerance Statement consider model remediation as the basis of risk control, both are applicable to the Framework. In this regard, the proposed rule change would add a footnote after the listing of the Model Risk Tolerance Statement and the existing reference to the Market Risk Tolerance Statement to describe that with respect to the key risks²¹ of model risk and market risk, each risk tolerance statement documents the overall risk reduction or mitigation objectives as it relates to model risk and market risk activities and documents the risk controls and other measures used to manage such activities, including escalation requirements in the event of risk metric breaches. The footnote would also state that the Risk Tolerance Statements are reviewed, revised, retired, and/or replaced, as the case may be, and approved by the BRC (as defined herein) annually, based upon the circumstances, and the reasonable best judgement of management, then existing relating to model risk management matters. Consistent with proposed terminology described above with respect to Sections 4.1 and 4.2, the Model Risk Tolerance Statement and the Market Risk Tolerance Statement would be referred to collectively in the Executive Summary as the “Risk Tolerance Statements.”

The Executive Summary also indicates that the Related Procedures may be updated or amended. The Clearing Agencies regularly review their internal policies and procedures, and in addition to updating or amending them as an administrative matter as

²⁰ The Market Risk Tolerance Statement articulates, among other things, risk tolerance levels covering margin backtests covering backtest coverage and stress tests covering exposure to extreme market moves. The conclusion, based on tolerance levels, focuses on model enhancement or model remediation, as applicable.

²¹ DTCC has identified a set of key risks to better guide the content, measurement, frequency, and focus of our discussion and management of risk generally across the Organization.

they deem appropriate, may also retire or replace internal policies and procedures as they deem appropriate. In this regard, the proposed rule change would also include text to the effect that each of the Related Procedures and the Model Risk Tolerance Statement may be retired or replaced (in addition to updated or amended).

Effective Date

The proposed rule change would become effective upon approval by the Commission.

2. Statutory Basis

The Clearing Agencies believe that the Framework is consistent with Section 17A(b)(3)(F) of the Act,²² as well as Rule 17Ad-22 (e)(4)(vii), and (e)(7)(vii) thereunder,²³ for the reasons described below.

Section 17A(b)(3)(F) of the Act²⁴ requires, inter alia, that the rules of a clearing agency be designed to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible. As described above, the Framework describes the process by which the Clearing Agencies identify, measure, monitor, and manage the risks associated with the design, development, implementation, use, and validation of quantitative models. The quantitative models covered by the Framework are applied by the Clearing Agencies, as applicable, to evaluate and address their respective risk exposures associated with their settlement activity and facilitate their ability to assure the safeguarding of securities and funds which

²² 15 U.S.C. 78q-1(b)(3)(F).

²³ Supra note 6.

²⁴ 15 U.S.C. 78q-1(b)(3)(F).

are in the custody or control of the clearing agency or for which it is responsible. In this regard, the proposed changes to the Framework support their ability to develop models that are applied to evaluate and address risk exposure and facilitate the safeguarding of securities and funds which are in the custody or control of the Clearing Agencies or for which they are responsible by (i) changing the governance structure for approval of a Model Validation to transfer the responsibility for approval of model validations to the MVC, which is composed of individuals with a higher level of expertise relating to model validations than members of the MRC, which is currently responsible for such approvals, thereby enhancing the ability of the group conducting Model Validations to evaluate risk exposures relating to models, (ii) incorporating the Model Risk Tolerance Statement into the Framework which describes risk tolerance levels covering model design and implementation, including consideration of a model's intended purpose and/or its adequacy of performance, and therefore including a cross-reference to a document which describes an important gauge with respect to the level of risk that may be tolerated as part of managing the risk presented to the Clearing Agencies relating to models, (iii) clarifying the definition of Model Owner, therefore defining the first line responsible for evaluating risk exposure, (iv) reflecting changes in the role of the Model Risk Governance Committee and a change its name, which relates to the change in governance structure that is designed to enhance the independence in its new role of responsibility for approval of Model Validations which would support the Clearing Agencies' ability to evaluate risk exposure, (v) redefining the first and second line responsibilities and incentives relating to model performance monitoring and oversight, therefore enhancing the process by which risk relating to models is evaluated, and (vi) making other technical

and clarifying changes to the text, as described above, to improve the text in defining roles and responsibilities for the processes established by the Clearing Agencies to monitor risk. Therefore, NSCC believes the proposed rule change is consistent with the requirements of Section 17A(b)(3)(F) of the Act,²⁵ because it would facilitate the ability of the Clearing Agencies to continue to develop models that are applied to evaluate and address risk exposure and allow them to maintain a Framework that facilitates the ability of the Clearing Agencies to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible, as described above.

Rule 17Ad-22(e)(4)(vii)²⁶ and (e)(7)(vii)²⁷ under the Act requires, inter alia, that a covered clearing agency establish, implement, maintain and enforce written policies and procedures reasonably designed to perform Model Validations on its credit risk models and liquidity risk models not less than annually or more frequently as may be contemplated by the clearing agency's risk management framework established pursuant to Rule 17Ad-22(e)(3).²⁸ As discussed above, the proposed rule change would amend the Framework to provide for enhanced clarity in the text and enhanced efficiency with respect to the approval process for Model Validations at least annually. In this regard, and as noted above, pursuant to the Framework, Model Validations are performed not

²⁵ Id.

²⁶ 17 CFR 240.17Ad-22(e)(4) (in particular, 17 C.F.R. 240.17Ad-22(e)(4)(vii)). See supra note 6.

²⁷ 17 CFR 240.17Ad-22(e)(7) (in particular, 17 C.F.R. 240.17Ad-22(e)(7)(vii)). See supra note 6.

²⁸ 17 CFR 240.17Ad-22(e)(3). See supra note 6.

less than annually on its credit risk models and liquidity risk models. Therefore, the Clearing Agencies believe that the proposed changes to the Framework are consistent with Rule 17Ad-22(e)(4)(vii)²⁹ and (e)(7)(vii)³⁰ under the Act.

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

None of the Clearing Agencies believe that the Framework would have any impact, or impose any burden, on competition because the proposed rule change reflects clarifying changes and provides for a more efficient internal governance process and would not effectuate any changes to the Clearing Agencies' model risk management tools as they currently apply to their respective Members or Participants.

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

The Clearing Agencies have not solicited or received any written comments relating to this proposal. The Clearing Agencies will notify the Commission of any written comments received by the Clearing Agencies.

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:

²⁹ Supra note 6.

³⁰ Supra note 6.

- (A) by order approve or disapprove such 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 (<http://www.sec.gov/rules/sro.shtml>); or
- Send an e-mail to rule-comments@sec.gov. Please include File Number SR-NSCC-2020-008 on the subject line.

Paper Comments:

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

All submissions should refer to File Number SR-NSCC-2020-008. 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 the filing also will be available for inspection and copying at the principal office of NSCC and on DTCC's website (<http://dtcc.com/legal/sec-rule-filings.aspx>). 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-NSCC-2020-008 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.³¹

Secretary

³¹ 17 CFR 200.30-3(a)(12).

TEXT OF PROPOSED RULE CHANGE

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~~Bold and strikethrough~~ text indicates proposed deleted language.

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