

Required fields are shown with yellow backgrounds and asterisks.

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| Page 1 of * 232 | SECURITIES AND EXCHANGE COMMISSION<br>WASHINGTON, D.C. 20549<br>Form 19b-4 | File No.* SR - 2018 - * 801 | Amendment No. (req. for Amendments *) |
|-----------------|--|-----------------------------|---------------------------------------|

Filing by Fixed Income Clearing Corporation  
Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

|   |                                      |                                     |   |  |  |
|---|--------------------------------------|-------------------------------------|---|--|--|
| Initial * <input checked="" type="checkbox"/>                             | Amendment * <input type="checkbox"/> | Withdrawal <input type="checkbox"/> | Section 19(b)(2) * <input type="checkbox"/> | Section 19(b)(3)(A) * <input type="checkbox"/> | Section 19(b)(3)(B) * <input type="checkbox"/> |
| Pilot <input type="checkbox"/>  |                                      |                                     | Rule  |  |  |
| Extension of Time Period for Commission Action * <input type="checkbox"/> |                                      | Date Expires * <input type="text"/> | <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 | Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934 |
| Section 806(e)(1) * <input checked="" type="checkbox"/>                                 | Section 806(e)(2) * <input type="checkbox"/>                                   |
|   | 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 type="checkbox"/> |
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**Description**

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

Changes to the Required Fund Deposit Calculation in the Government Securities Division Rulebook

**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 \* Donaldine Last Name \* Temple

Title \* Executive Director and Associate General Counsel

E-mail \* dtemple@dtcc.com

Telephone \* (212) 855-3277 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 01/12/2018

By Donaldine B. Temple

Executive Director and Associate General Counsel

(Name \*)

dtemple@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 Advance Notice

(a) This advance notice of Fixed Income Clearing Corporation (“FICC”) consists of modifications to the Government Securities Division (“GSD”) Rulebook (the “GSD Rules”)<sup>1</sup>, attached hereto as Exhibit 5. The purpose of this filing is to amend the “GSD Rules to propose changes to GSD’s method of calculating Netting Members’ margin, referred to in the GSD Rules as the Required Fund Deposit amount.<sup>2</sup> Specifically, FICC is proposing to (1) change its method of calculating the VaR Charge component, (2) add a new component referred to as the “Blackout Period Exposure Adjustment” (as defined in Item 10.I. below), (3) eliminate the Blackout Period Exposure Charge and the Coverage Charge components, (4) amend the Backtesting Charge component to (i) include the backtesting deficiencies of certain GCF Counterparties during the Blackout Period<sup>3</sup> and (ii) give GSD the ability to assess the Backtesting Charge on an intraday basis for all Netting Members, and (5) amend the calculation for determining the Excess Capital Premium for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members. In addition, FICC is proposing to provide transparency with respect to GSD’s existing authority to calculate and assess Intraday Supplemental Fund Deposit amounts.<sup>4</sup>

FICC has attached the following Exhibits:

1. Exhibit 3a reflects the backtesting results from FICC’s comparison of the aggregate Clearing Fund requirement (“CFR”) under GSD’s current methodology and the aggregate CFR under the proposed methodology (as listed in the first paragraph above) to historical returns of end-of-day snapshots of each Netting Member’s portfolio for the period May 2016 through October 2017. The CFR backtesting results under the proposed methodology were calculated in two ways for end-of-day portfolios: one set of results included the proposed Blackout Period Exposure Adjustment and the other set of results excluded the proposed Blackout Period Exposure Adjustment.

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<sup>1</sup> Available at DTCC’s website, [www.dtcc.com/legal/rules-and-procedures.aspx](http://www.dtcc.com/legal/rules-and-procedures.aspx). Capitalized terms used herein and not defined shall have the meaning assigned to such terms in the GSD Rules.

<sup>2</sup> Id. at GSD Rules 1 and 4.

<sup>3</sup> As further discussed in Item 10.I. below, the proposed Backtesting Charge would consider a GCF Counterparty’s backtesting deficiencies that are attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.

<sup>4</sup> Pursuant to the GSD Rules, FICC has the existing authority and discretion to calculate an additional amount on an intraday basis in the form of an Intraday Supplemental Clearing Fund Deposit. See GSD Rules 1 and 4, Section 2a, supra note 1.

2. Exhibit 3b reflects an impact study that shows the portfolio level VaR Charge under the proposed methodology for the period January 3, 2013 through December 30, 2016,<sup>5</sup> and

3. Exhibit 3c reflects an impact study that shows the aggregate Required Fund Deposit amount by Netting Member for the period May 1, 2017 through November 30, 2017.

4. Exhibit 5 reflects the GSD Initial Margin Model (the “QRM Methodology”). The proposed QRM Methodology would reflect the proposed methodology of the VaR Charge calculation and the proposed Blackout Period Exposure Adjustment.

FICC is requesting confidential treatment of the above-referenced backtesting results, impact studies and QRM Methodology, and has filed it separately with the Securities and Exchange Commission (“Commission”).<sup>6</sup>

(b) Not applicable.

(c) Not applicable.

## **2. Procedures of the Self-Regulatory Organization**

The proposed rule change was approved by the Risk Committee of FICC’s Board of Directors on September 12, 2017, October 17, 2017 and December 19, 2017.

## **3. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Advance Notice**

Not applicable.

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

Not applicable.

## **5. Self-Regulatory Organization's Statement on Comments on the Advance Notice Received from Members, Participants, or Others**

Written comments relating to the proposed change have not been solicited or received by FICC. FICC will notify the Commission of any written comments received by FICC.

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<sup>5</sup> This period includes market stress events such as the U.S. presidential election, United Kingdom’s vote to leave the European Union, and the 2013 spike in U.S. Treasury yields which resulted from the Federal Reserve’s plans to reduce its balance sheet purchases.

<sup>6</sup> See 17 CFR 240-24b-2.

**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)**

Not applicable.

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

Not applicable.

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

Not applicable.

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

I. Description of the Change

The purpose of this filing is to amend the GSD Rules to propose changes to GSD's method of calculating Netting Members' margin, referred to in the GSD Rules as the Required Fund Deposit amount. Specifically, FICC is proposing to (1) change its method of calculating the VaR Charge component, (2) add the Blackout Period Exposure Adjustment as a new component, (3) eliminate the Blackout Period Exposure Charge and the Coverage Charge components, (4) amend the Backtesting Charge to (i) consider the backtesting deficiencies of certain GCF Counterparties during the Blackout Period<sup>7</sup> and (ii) give GSD the ability to assess the Backtesting Charge on an intraday basis for all Netting Members, and (5) amend the calculation for determining the Excess Capital Premium for Broker Netting Members, Dealer Netting Members and Inter-Dealer Broker Netting Members. In addition, FICC is proposing to provide transparency with respect to GSD's existing authority to calculate and assess Intraday Supplemental Fund Deposit amounts.<sup>8</sup>

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<sup>7</sup> As further discussed below, the proposed Backtesting Charge would consider a GCF Counterparty's backtesting deficiencies that are attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.

<sup>8</sup> Pursuant to the GSD Rules, FICC has the existing authority and discretion to calculate an additional amount on an intraday basis in the form of an Intraday Supplemental Clearing Fund Deposit. See GSD Rules 1 and 4, Section 2a, supra note 1.

The proposed QRM Methodology would reflect the proposed methodology of the VaR Charge calculation and the proposed Blackout Period Exposure Adjustment calculation.

**A. *The Required Fund Deposit and Clearing Fund Calculation Overview***

GSD provides trade comparison, netting and settlement for the U.S. Government securities marketplace. Pursuant to the GSD Rules, Netting Members may process the following securities and transaction types through GSD: (1) buy-sell transactions in eligible U.S. Treasury and Agency securities, (2) delivery versus payment repurchase agreement (“repo”) transactions, where the underlying collateral must be U.S. Treasury securities or Agency securities, and (3) GCF Repo Transactions, where the underlying collateral must be U.S. Treasury securities, Agency securities, or eligible mortgage-backed securities.

A key tool that FICC uses to manage counterparty risk is the daily calculation and collection of Required Fund Deposits from Netting Members.<sup>9</sup> The Required Fund Deposit serves as each Netting Member’s margin. Twice each business day, Netting Members are required to satisfy their Required Fund Deposit by 9:30 a.m. (E.T.) (the “AM RFD”) and 2:45 p.m. (E.T.) (the “PM RFD”). The aggregate of all Netting Members’ Required Fund Deposits constitutes the Clearing Fund of GSD, which FICC would access should a defaulting Netting Member’s own Required Fund Deposit be insufficient to satisfy losses to GSD caused by the liquidation of that Netting Member’s portfolio. The objective of a Netting Member’s Required Fund Deposit is to mitigate potential losses to GSD associated with liquidation of such Member’s portfolio in the event that FICC ceases to act for such Member (hereinafter referred to as a “default”).

As discussed below, a Netting Member’s Required Fund Deposit currently consists of the VaR Charge and, to the extent applicable, the Coverage Charge, the Blackout Period Exposure Charge, the Backtesting Charge, the Excess Capital Premium, and other components.<sup>10</sup>

**1. GSD’s Required Fund Deposit calculation – the VaR Charge component**

The VaR Charge generally comprises the largest portion of a Netting Member’s Required Fund Deposit amount. Currently, GSD uses a methodology referred to as the “full revaluation” approach to capture the market price risk associated with the securities in a Netting Member’s portfolio. The full revaluation approach uses valuation algorithms to fully reprice each security

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<sup>9</sup> See GSD Rules 1 and 4, supra note 1.

<sup>10</sup> Pursuant to the GSD Rules, the Required Fund Deposit calculation may include the following additional components: the Holiday Charge, the Cross-Margining Reduction, the GCF Premium Charge, the GCF Repo Event Premium, the Early Unwind Intraday Charge and the Special Charge. See GSD Rules 1 and 4, supra note 1. FICC is not proposing any changes to these components, thus a description of these components is not included in this rule filing.

in a Netting Member's portfolio over a range of historically simulated scenarios. These historical market moves are then used to project the potential gains or losses that could occur in connection with the liquidation of a defaulting Netting Member's portfolio to determine the amount of the VaR Charge, which is calibrated to cover the projected liquidation losses at a 99% confidence level.

The VaR Charge provides an estimate of the possible losses for a given portfolio based on a given confidence level over a particular time horizon. The current VaR Charge is calibrated at a 99% confidence level based on a front-weighted<sup>11</sup> 1-year look-back period assuming a three-day liquidation period.<sup>12</sup> In the event that FICC determines that certain classes of securities in a Netting Member's portfolio (including, but not limited to, the repo rate for Term Repo Transactions and Forward-Starting Repo Transactions) are less amenable to statistical analysis,<sup>13</sup> FICC may apply a historic index volatility model rather than the VaR calculation.<sup>14</sup>

In addition to the full revaluation approach that GSD uses to calculate the VaR Charge, GSD also utilizes "implied volatility indicators" among the assumptions and other observable market data as part of its volatility model. Specifically, GSD applies a multiplier (also known as the "augmented volatility adjustment multiplier") to calculate the VaR Charge. The multiplier is based on the levels of change in current and implied volatility measures of market benchmarks.

FICC also employs a supplemental risk charge referred to as the Margin Proxy.<sup>15</sup> The Margin Proxy is designed to help ensure that each Netting Member's VaR Charge is adequate and, at the minimum, mirrors historical price moves.

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<sup>11</sup> A fronted weighted approach means that GSD allows recently observed market data to have more impact on the VaR Charge than older historic market data.

<sup>12</sup> The three-day liquidation period is sometimes referred to as the "margin period of risk" or "closeout-period." This period reflects the time between the most recent collection of the Required Fund Deposit from a defaulting Netting Member and the liquidation of such Netting Member's portfolio. FICC currently assumes that it would take three days to liquidate or hedge a portfolio in normal market conditions.

<sup>13</sup> Certain classes of securities are less amenable to statistical analysis because FICC believes that it does not observe sufficient historical market price data to reliably estimate the 99% confidence level.

<sup>14</sup> See GSD Rule 4 Section 1b(a), *supra* note 1.

<sup>15</sup> The Margin Proxy is currently used to provide supplemental coverage to the VaR Charge, however, pursuant to this rule filing, the Margin Proxy would only be used as an alternative volatility calculation as described below in subsection B.3. – *Proposed change to implement the Margin Proxy as the VaR Charge during a vendor data disruption.*

## **2. GSD's Required Fund Deposit calculation – other components**

In addition to the VaR Charge, a Netting Member's Required Fund Deposit calculation may include a number of other components including, but not limited to, the Coverage Charge, the Blackout Period Exposure Charge, and the Backtesting Charge.<sup>16</sup> In addition, the Required Fund Deposit may include an Excess Capital Premium charge.<sup>17</sup>

The Coverage Charge is designed to address potential shortfalls<sup>18</sup> in the margin amount calculated by the existing VaR Charge and Funds-Only Settlement.<sup>19</sup> Thus, the Coverage Charge is applied to supplement the VaR Charge to help ensure that a Netting Member's backtesting coverage achieves the 99% confidence level.

The Blackout Period Exposure Charge is applied when FICC determines that a GCF Counterparty has experienced backtesting deficiencies due to reductions in the notional value of the mortgage-backed securities used to collateralize its GCF Repo Transactions during the monthly Blackout Period. This charge is designed to mitigate FICC's exposure resulting from potential decreases in the collateral value of mortgage-backed securities that occur during the monthly Blackout Period.

The Backtesting Charge is applied when FICC determines that a Netting Member's portfolio has experienced backtesting deficiencies over the prior 12-month period. The Backtesting Charge is designed to mitigate exposures to GSD caused by settlement risks that may not be adequately captured by GSD's Required Fund Deposit.

The Excess Capital Premium is applied to a Netting Member's Required Fund Deposit when its VaR Charge exceeds its Excess Capital. The Excess Capital Premium is designed to more effectively manage a Netting Member's credit risk to GSD that is caused because such

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<sup>16</sup> See supra note 10.

<sup>17</sup> See GSD Rules 1 and 3, Section 1, supra note 1.

<sup>18</sup> While multiple factors may contribute to a shortfall, shortfalls could be observed based on the mark-to-market change on a Netting Member's positions after the last margin collection.

<sup>19</sup> The Coverage Charge is calculated as the front-weighted average of backtesting coverage deficiencies observed over the prior 100 days. The backtesting coverage deficiencies are determined by comparing (x) the simulated liquidation profit and loss of a Netting Member's portfolio (using actual positions in the Member's portfolio and the actual historical returns on the security positions in the portfolio) to (y) the sum of the VaR Charge and the Funds-Only Settlement Amount (which is the mark-to-market amount) in order to determine whether there would have been any shortfalls between the amounts collected.

Netting Member's trading activity has resulted in a VaR Charge that is greater than its excess regulatory capital.

### **3. GSD's backtesting process**

FICC employs daily backtesting to determine the adequacy of each Netting Member's Required Fund Deposit. Backtesting compares the Required Fund Deposit for each Netting Member with actual price changes in the Netting Member's portfolio. The portfolio values are calculated using the actual positions in a Netting Member's portfolio on a given day and the observed security price changes over the following three days. The backtesting results are reviewed by FICC as part of its performance monitoring and assessment of the adequacy of each Netting Member's Required Fund Deposit. As noted above, a Backtesting Charge may be assessed if GSD determines that a Netting Member's Required Fund Deposit may not fully address the projected liquidation losses estimated from such Netting Member's settlement activity. Similarly, the Coverage Charge may be assessed to address potential shortfalls in the VaR Charge calculation. The Coverage Charge supplements the VaR Charge to help ensure that the Netting Member's backtesting coverage achieves the 99% confidence level. The Coverage Charge considers the backtesting results of only the VaR Charge (including the augmented volatility adjustment multiplier) and mark-to-market, while the Backtesting Charge considers the total Required Fund Deposit amount.

#### **B. Proposed changes to GSD's calculation of the VaR Charge**

FICC is proposing to amend its calculation of GSD's VaR Charge because during the fourth quarter of 2016, FICC's current methodology for calculating the VaR Charge did not respond effectively to the market volatility that existed at that time. As a result, the VaR Charge did not achieve backtesting coverage at a 99% confidence level and therefore yielded backtesting deficiencies beyond FICC's risk tolerance. In response, FICC implemented the Margin Proxy to help ensure that each Netting Member's VaR Charge achieves a minimum 99% confidence level and, at the minimum, mirrors historical price moves, while FICC continued the development effort on the proposed sensitivity based approach to remediate the observed model weaknesses.<sup>20</sup>

As a result of FICC's review of GSD's existing VaR model deficiencies, FICC is proposing to: (1) replace the full revaluation approach with the sensitivity approach, (2) eliminate the augmented volatility adjustment multiplier, (3) employ the Margin Proxy as an alternative volatility calculation rather than as a minimum volatility calculation, (4) utilize a haircut method for securities that lack sufficient historical data, and (5) establish a minimum calculation, referred to as the VaR Floor (as defined below in subsection 5), as the minimum VaR Charge. These proposed changes are described in detail below.

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<sup>20</sup> See supra note 15.

**1. Proposed change to replace the full revaluation approach with the sensitivity approach**

FICC is proposing to address GSD's existing VaR model deficiencies by replacing the full revaluation method with the sensitivity approach.<sup>21</sup> The current full revaluation approach uses valuation algorithms to fully reprice each security in a Netting Member's portfolio over a range of historically simulated scenarios. While there are benefits to this method, some of its deficiencies are that it requires significant historical market data inputs, calibration of various model parameters and extensive quantitative support for price simulations.

FICC believes that the proposed sensitivity approach would address these deficiencies because it would leverage external vendor<sup>22</sup> expertise in supplying the market risk attributes, which would then be incorporated by FICC into GSD's model to calculate the VaR Charge. Specifically, FICC would source security-level risk sensitivity data and relevant historical risk factor time series data from an external vendor for all Eligible Securities.

The sensitivity data would be generated by a vendor based on its econometric, risk and pricing models.<sup>23</sup> Because the quality of this data is an important component of calculating the

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<sup>21</sup> GSD's proposed sensitivity approach is similar to the sensitivity approach that FICC's Mortgage-Backed Securities Division ("MBSD") uses to calculate the VaR Charge for MBSD clearing members. See MBSD's Clearing Rules, available at DTCC's website, [www.dtcc.com/legal/rules-and-procedures.aspx](http://www.dtcc.com/legal/rules-and-procedures.aspx). See Securities Exchange Act Release No. 79868 (January 24, 2017) 82 FR 8780 (January 30, 2017) (SR-FICC-2016-007) and Securities Exchange Act Release No. 79643 (December 21, 2016), 81 FR 95669 (December 28, 2016) (SR-FICC-2016-801).

<sup>22</sup> FICC does not believe that its engagement of the vendor would present a conflict of interest because the vendor is not an existing Netting Member nor are any of the vendor's affiliates existing Netting Members. To the extent that the vendor or any of its affiliates submit an application to become a Netting Member, FICC will negotiate an appropriate information barrier with the applicant in an effort to prevent a conflict of interest from arising. An affiliate of the vendor currently provides an existing service to FICC; however, this arrangement does not present a conflict of interest because the existing agreement between FICC and the vendor, and the existing agreement between FICC and the vendor's affiliate each contain provisions that limit the sharing of confidential information.

<sup>23</sup> The following risk factors would be incorporated into GSD's proposed sensitivity approach: key rate, convexity, implied inflation rate, agency spread, mortgage-backed securities spread, volatility, mortgage basis, and time risk factor. These risk factors are defined as follows:

VaR Charge, FICC would conduct independent data checks to verify the accuracy and consistency of the data feed received from the vendor. With respect to the historical risk factor time series data, FICC has evaluated the historical price moves and determined which risk factors primarily explain those price changes, a practice commonly referred to as risk attribution.

FICC's proposal to use the vendor's risk analytics data requires that FICC take steps to mitigate potential model risk. FICC has reviewed a description of the vendor's calculation methodology and the manner in which the market data is used to calibrate the vendor's models. FICC understands and is comfortable with the vendor's controls, governance process and data quality standards. FICC would conduct an independent review of the vendor's release of a new

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- key rate measures the sensitivity of a price change to changes in interest rates;
- convexity measures the degree of curvature in the price/yield relationship of key interest rates;
- implied inflation rate measures the difference between the yield on an ordinary bond and the yield on an inflation-indexed bond with the same maturity;
- agency spread is yield spread that is added to a benchmark yield curve to discount an Agency bond's cash flows to match its market price;
- mortgage-backed securities spread is the yield spread that is added to a benchmark yield curve to discount a to-be-announced ("TBA") security's cash flows to match its market price;
- volatility reflects the implied volatility observed from the swaption market to estimate fluctuations in interest rates;
- mortgage basis captures the basis risk between the prevailing mortgage rate and a blended Treasury rate; and
- time risk factor accounts for the time value change (or carry adjustment) over the assumed liquidation period.

The above-referenced risk factors are similar to the risk factors currently utilized in MBS's sensitivity approach, however, GSD has included other risk factors that are specific to the U.S. Treasury securities, Agency securities and mortgage-backed securities cleared through GSD.

Concerning U.S. Treasury securities and Agency securities, FICC would select the following risk factors: key rates, convexity, agency spread, implied inflation rates, volatility, and time.

For mortgage-backed securities, each security would be mapped to a corresponding TBA forward contract and FICC would use the risk exposure analytics for the TBA as an estimate for the mortgage-backed security's risk exposure analytics. FICC would use the following risk factors to model a TBA security: key rates, convexity, mortgage-backed securities spread, volatility, mortgage basis, and time. To account for differences between mortgage-backed securities and their corresponding TBA, FICC would apply an additional basis risk adjustment.

version of its model prior to using it in GSD's proposed sensitives approach calculation. In the event that the vendor changes its model and methodologies that produce the risk factors and risk sensitivities, FICC would analyze the effect of the proposed changes on GSD's proposed sensitivity approach. Future changes to the QRM Methodology would be subject to a proposed rule change pursuant to the Securities Exchange Act of 1934 (the "Act") Rule 19b-4 ("Rule 19b-4")<sup>24</sup> and may be subject to an advance notice filing pursuant to Section 806(e)(1) of Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act, entitled the Payment, Clearing, and Settlement Supervision Act of 2010 (the "Clearing Supervision Act")<sup>25</sup> and Rule 19b-4(n)(1)(I) under the Act.<sup>26</sup> Modifications to the proposed VaR Charge may be subject to a proposed rule change pursuant to Rule 19b-4<sup>27</sup> and/or an advance notice filing pursuant to Section 806(e)(1) of the Clearing Supervision Act<sup>28</sup> and Rule 19b-4(n)(1)(I) under the Act.<sup>29</sup>

Under the proposed approach, a Netting Member's portfolio risk sensitivities would be calculated by FICC as the aggregate of the security level risk sensitivities weighted by the corresponding position market values. More specifically, FICC would look at the historical changes of the chosen risk factors during the look-back period in order to generate risk scenarios to arrive at the market value changes for a given portfolio. A statistical probability distribution would be formed from the portfolio's market value changes, which are then calibrated to cover the projected liquidation losses at a 99% confidence level. The portfolio risk sensitivities and the historical risk factor time series data would then be used by FICC's risk model to calculate the VaR Charge for each Netting Member.

The proposed sensitivity approach differs from the current full revaluation approach mainly in how the market value changes are calculated. The full revaluation approach accounts for changes in market variables and instrument specific characteristics of U.S. Treasury/Agency securities and mortgage-backed securities by incorporating certain historical data to calibrate a pricing model that generates simulated prices. This data is used to create a distribution of returns per each security. By comparison, the proposed sensitivity approach would simulate the market value changes of a Netting Member's portfolio under a given market scenario as the sum of the portfolio risk factor exposures multiplied by the corresponding risk factor movements.

FICC believes that the sensitivity approach would provide three key benefits. First, the sensitivity approach incorporates a broad range of structured risk factors and a Netting Member

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<sup>24</sup> See 17 CFR 240.19b-4.

<sup>25</sup> See 12 U.S.C. 5465(e)(1).

<sup>26</sup> See 17 CFR 240.19b-4(n)(1)(I).

<sup>27</sup> See 17 CFR 240.19b-4.

<sup>28</sup> See 12 U.S.C. 5465(e)(1).

<sup>29</sup> See 17 CFR 240.19b-4(n)(1)(I).

portfolios' exposure to these risk factors, while the full revaluation approach is calibrated with only security level historical data that is supplemented by the augmented volatility adjustment multiplier. The proposed sensitivity approach integrates both observed risk factor changes and current market conditions to more effectively respond to current market price moves that may not be reflected in the historical price moves combined with the augmented volatility adjustment multiplier. In this regard, FICC has concluded, based on its assessment of the backtesting results of the proposed sensitivity approach and its comparison of those results to the backtesting results of the current full revaluation approach<sup>30</sup> that the proposed sensitivity approach would address the deficiencies observed in the existing model because it would leverage external vendor expertise, which FICC does not need to develop in-house, in supplying the market risk attributes that would then be incorporated by FICC into GSD's model to calculate the VaR Charge. With respect to FICC's review of the backtesting results, FICC believes that the calculation of the VaR Charge using the proposed sensitivity approach would provide better coverage on volatile days while not significantly increasing the overall Clearing Fund.<sup>31</sup> In fact, the calculation of the VaR Charge using the proposed sensitivity approach would produce a VaR Charge amount that is consistent with the current VaR Charge calculation, as supplemented by Margin Proxy.<sup>32</sup>

The second benefit of the proposed sensitivity approach is that it would provide more transparency to Netting Members. Because Netting Members typically use risk factor analysis for their own risk and financial reporting, such Members would have comparable data and analysis to assess the variation in their VaR Charge based on changes in the market value of their

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<sup>30</sup> The backtesting results compared the aggregate CFR under the current methodology and the aggregate CFR under the proposed methodology to historical returns of end-of-day snapshots of each Netting Member's portfolio for the period May 2016 through October 2017. The CFR backtesting results under the proposed methodology were calculated in two ways for end-of-day portfolios: one set of results included the proposed Blackout Period Exposure Adjustment and the other set of results excluded the proposed Blackout Period Exposure Adjustment.

<sup>31</sup> The CFR backtesting results under the proposed methodology (both with and without Blackout Period Exposure Adjustment) indicate that the proposed methodology provided better overall coverage during the volatile period following the U.S. election than under the current methodology. Exhibit 3a shows that the CFR Backtesting results under the proposed methodology were also more stable over the May 2016 through October 2017 study period than the CFR backtesting results under the existing methodology.

<sup>32</sup> FICC implemented the Margin Proxy at the end of April 2017. As a result, the CFR backtesting coverage under the current methodology increased in May 2017 and were more consistent with the CFR backtesting results under the proposed methodology from May 2017 through October 2017. Based on data provided in Exhibit 3c, FICC observes that for the period May 1, 2017 to November 30, 2017 an approximate 7% increase in average aggregate AM RFD across all Netting Members.

portfolios. Thus, Netting Members would be able to simulate the VaR Charge to a closer degree than under the existing full revaluation approach.

The third benefit of the proposed sensitivity approach is that it would provide FICC with the ability to adjust the look-back period that FICC uses for purposes of calculating the VaR Charge. Specifically, FICC would change the look-back period from a front-weighted<sup>33</sup> 1-year look-back (which is currently utilized today) to a 10-year look-back period that is not front-weighted and would include, to the extent applicable, an additional stressed period.<sup>34</sup> The proposed extended look-back period would help to ensure that the historical simulation contains a sufficient number of historical market conditions (including but not limited to stressed market conditions).

While FICC could extend the 1-year look-back period in the existing full revaluation approach to a 10-year look-back period, the performance of the existing model could deteriorate if current market conditions are materially different than indicated in the historical data. Additionally, since the full revaluation approach requires FICC to maintain in-house complex pricing models and mortgage prepayment models, enhancing these models to extend the look-back period to include 10 years of historical data involves significant model development. The sensitivity approach, on the other hand, would leverage external vendor data to incorporate a longer look-back period of 10 years, which would allow the proposed model to capture periods of historical volatility.

In the event FICC observes that the 10-year look-back period does not contain a sufficient number of stressed market conditions, FICC would have the ability to include an additional period of historically observed stressed market conditions to a 10-year look-back period or adjust the length of look-back period. The additional stress period is designed to be a continuous period (typically 1 year). FICC believes that it is appropriate to assess on an annual basis whether an additional stressed period should be included. This assessment, which will only occur annually, would include a review of (1) the largest moves in the dominating market risk factor of the proposed sensitivity approach, (2) the impact analyses resulting from the removal

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<sup>33</sup> A front-weighted look-back period assigns more weight to the most recent market observations thus effectively diminishing the value of older market observations. The front-weighted approach is based on the assumption that the most recent price history is more relevant to current market volatility levels.

<sup>34</sup> Under the proposed model, the 10-year look-back period would include the 2008/2009 financial crisis scenario. To the extent that an equally or more stressed market period does not occur when the 2008/2009 financial crisis period is phased out from the 10-year look-back period (i.e., from September 2018 onward), pursuant to the QRM methodology document, FICC would continue to include the 2008/2009 financial crisis scenario in its historical scenarios. However, if an equally or more stressed market period emerges in the future, FICC may choose not to augment its 10-year historical scenarios with those from the 2008/2009 financial crisis.

and/or addition of a stressed period, and (3) the backtesting results of the proposed look-back period. As described in the QRM Methodology, approval by DTCC's Model Risk Governance Committee ("MRGC") and, to the extent necessary, the Management Risk Committee ("MRC") would be required to determine when to apply an additional period of stressed market conditions to the look-back period and the appropriate historical stressed period to utilize if it is not within the current 10-year period.

**2. Proposed change to amend the VaR Charge to eliminate the augmented volatility adjustment multiplier**

As described above, the augmented volatility adjustment multiplier gives GSD the ability to adjust its volatility calculations as needed to improve the performance of its VaR the model in periods of market volatility. The augmented volatility adjustment multiplier was designed to mitigate the effect of the 1-year look-back period used in the existing full revaluation approach because it allowed the model to better react to conditions that may not have been within the recent historical one-year period. FICC is proposing to eliminate the augmented volatility adjustment multiplier because it would be no longer necessary given that the proposed sensitivity approach would have a longer look-back period and the ability to include an additional stressed market condition to account for periods of market volatility.

**3. Proposed change to implement the Margin Proxy as the VaR Charge during a vendor data disruption**

*a. Vendor Data Disruption*

In connection with FICC's proposal to source data for the proposed sensitivity approach, FICC is also proposing procedures that would govern in the event that the vendor fails to provide risk analytics data. If the vendor fails to provide any data or a significant portion of the data timely, FICC would use the most recently available data on the first day that such data disruption occurs. If it is determined that the vendor will resume providing data within five (5) business days, FICC's management would determine whether the VaR Charge should continue to be calculated by using the most recently available data along with an extended look-back period or whether the Margin Proxy should be invoked, subject to the approval of DTCC's Group Chief Risk Officer or his/her designee. If it is determined that the data disruption will extend beyond five (5) business days, the Margin Proxy would be applied as an alternative volatility calculation for the VaR Charge subject to the proposed VaR Floor.<sup>35</sup> FICC's proposed use of the Margin Proxy would be subject to the approval of the MRC followed by notification to FICC's Board Risk Committee. FICC would continue to calculate the Margin Proxy on a daily basis and this calculation would continue to reflect separate calculations for U.S. Treasury/Agency securities

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<sup>35</sup> The proposed VaR Floor is defined below in subsection B.5 – *Proposed change to amend the VaR Charge calculation to establish a VaR Floor.*

and mortgage-backed securities.<sup>36</sup> The Margin Proxy would be subject to monthly performance review by the MRGC. FICC would monitor the performance of the Margin Proxy calculation on a monthly basis to ensure that it could be used in the circumstance described above. Specifically, FICC would monitor each Netting Member's Required Fund Deposit and the aggregate Clearing Fund requirements versus the requirements calculated by Margin Proxy. FICC would also backtest the Margin Proxy results versus the three-day profit and loss based on actual market price moves. If FICC observes material differences between the Margin Proxy calculations and the aggregate Clearing Fund requirement calculated using the proposed sensitivity approach, or if the Margin Proxy's backtesting results do not meet FICC's 99% confidence level, FICC management may recommend remedial actions to the MRGC, and to the extent necessary the MRC, such as increasing the look-back period and/or applying an appropriate historical stressed period to the Margin Proxy calibration.

As noted above, FICC intends to source certain sensitivity data and risk factor data from a vendor. FICC's Quantitative Risk Management, Vendor Risk Management, and Information Technology teams have conducted due diligence of the vendor in order to evaluate its control framework for managing key risks. FICC's due diligence included an assessment of the vendor's technology risk, business continuity, regulatory compliance, and privacy controls. FICC has existing policies and procedures for data management that includes market data and analytical data provided by vendors. These policies and procedures do not have to be amended in connection with this proposed rule change. FICC also has tools in place to assess the quality of the data that it receives from vendors.

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<sup>36</sup> Currently, GSD conducts separate calculations in order to cover the historical market prices of U.S. Treasury/Agency securities and mortgage-backed securities, respectively, because the historical price changes of these asset classes are different as a result of market factors such as credit spreads and prepayment risk. Separate calculations also provide FICC with the ability to monitor the performance of each asset class individually. Each security in a Netting Member's Margin Portfolio is mapped to a separate benchmark based on the security's asset class and maturity. All securities within each benchmark are then aggregated into a net exposure. FICC then applies an applicable haircut to the net exposure per benchmark to determine the net price risk for each benchmark. Finally, FICC determines the asset class price risk ("Asset Class Price Risk") for U.S. Treasury/Agency securities and mortgage-backed securities benchmarks separately by aggregating the respective net price risk. For the U.S. Treasury benchmarks, the calculation includes a correlation adjustment to provide risk diversification across tenor buckets that has been historically observed across the U.S. Treasury benchmarks. The Margin Proxy is the sum of the U.S. Treasury/Agency securities and mortgage-backed securities Asset Class Price Risk. No changes are being proposed to this calculation.

b. *Regulation SCI Implications*

Rule 1001(c)(1) of Regulation Systems Compliance and Integrity (“SCI”) requires FICC to establish, maintain, and enforce reasonably designed written policies and procedures that include the criteria for identifying responsible SCI personnel, the designation and documentation of responsible SCI personnel, and escalation procedures to quickly inform responsible SCI personnel of potential SCI events.<sup>37</sup> Further, pursuant to Rule 1002 of Regulation SCI, each responsible SCI personnel determines when there is a reasonable basis to conclude that a SCI event has occurred, which will trigger certain obligations of a SCI entity with respect to such SCI events.<sup>38</sup> FICC has existing policies and procedures that reflect established criteria that must be used by responsible SCI personnel to determine whether a disruption to, or significantly downgrade of, the normal operation of FICC’s risk management system has occurred as defined under Regulation SCI. These policies and procedures do not have to be amended in connection with this proposed rule change. In the event that the vendor fails to provide the requisite risk analytics data, the responsible SCI personnel would determine whether a SCI event has occurred, and FICC would fulfill its obligations with respect to the SCI event.

4. **Proposed change to utilize a haircut method to measure the risk exposure of securities that lack historical data**

Occasionally, portfolios contain classes of securities that reflect market price changes that are not consistently related to historical risk factors. The value of these securities is often uncertain because the securities’ market volume varies widely, thus the price histories are limited. Because the volume and price information for such securities is not robust, a historical simulation approach would not generate VaR Charge amounts that adequately reflect the risk profile of such securities. Currently, GSD Rule 4 provides that FICC may use a historic index volatility model to calculate the VaR Charge for these classes of securities.<sup>39</sup> FICC is proposing to amend GSD Rule 4 to utilize a haircut method based on a historic index volatility model for any security that lack sufficient historical data to be incorporated into the proposed sensitivity approach.

FICC believes that the proposal to implement a haircut method for securities that lack sufficient historical information would allow FICC to use appropriate market data to estimate a margin at a 99% confident level, thus helping to ensure that sufficient margin would be calculated for portfolios that contain these securities. FICC would continue to manage the market risk of clearing these securities by conducting analysis on the type of securities that cannot be processed by the proposed VaR model and engaging in periodic reviews of the haircuts used for calculating margin for these types of securities.

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<sup>37</sup> See 17 CFR 242.1001(c)(1).

<sup>38</sup> See 17 CFR 242.1002.

<sup>39</sup> See GSD Rule 4, supra note 1.

FICC is proposing to calculate the VaR Charge for these securities by utilizing a haircut approach based on a market benchmark with a similar risk profile as the related security. The proposed haircut approach would be calculated separately for U.S. Treasury/Agency securities (other than (x) treasury floating-rate notes and (y) term repo rate volatility for Term Repo Transactions and Forward-Starting Repo Transactions (including term and forward-starting GCF Repo Transactions))<sup>40</sup> and mortgage-backed securities.

Specifically, each security in a Netting Member's portfolio would be mapped to a respective benchmark based on the security's asset class and remaining maturity, then all securities within each benchmark would be aggregated into a net exposure. FICC would apply an applicable haircut to the net exposure per benchmark to determine the net price risk for each benchmark. Finally, the net price risk would be aggregated across all benchmarks (but separately for U.S. Treasury/Agency securities and mortgage-backed securities) and a correlation adjustment<sup>41</sup> would be applied to securities mapped to the U.S. Treasury benchmarks to provide risk diversification across tenor buckets that were historically observed.

#### **5. Proposed change to amend the VaR Charge calculation to establish a VaR Floor**

FICC is proposing to amend the existing calculation of the VaR Charge to include a minimum amount, which would be referred to as the "VaR Floor." The proposed VaR Floor would be a calculated amount that would be used as the VaR Charge when the sum of the amounts calculated by the proposed sensitivity approach and haircut method is less than the proposed VaR Floor. FICC's proposal to establish a VaR Floor seeks to address the risk that the proposed VaR model calculates a VaR Charge that is erroneously low where the gross market value of unsettled positions in the Netting Member's portfolio is high and the cost of liquidation in the event of a Member default could also be high. This would be likely to occur when the proposed VaR model applies substantial risk offsets among long and short positions in different classes of securities that have a high degree of historical price correlation. Because this high

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<sup>40</sup> GSD is not proposing any changes to its current approach to calculating the VaR Charge for floating rate notes. Currently, GSD uses a haircut approach with a constant discount margin movement scenario. The discount margin movement scenario is based on the current market condition of the floating rate note price movements. This amount plus the calculated discount margin sensitivity of each floating rate note issue's market price plus the formula provided by the U.S. Department of Treasury equals the haircut of the floating rate note portion of a Netting Member's portfolio. GSD is also not proposing any change to its current approach to calculating the VaR Charge for repo interest volatility, which is based on internally constructed repo interest rate indices.

<sup>41</sup> The correlation adjustment is based on 3-day returns during a 10-year look-back. It reflects the average amount that the 3-day returns of each benchmark moves in relation to one another. The correlation adjustment would only be applied for U.S. Treasury and Agency indices with maturities greater than 1 year.

degree of historical price correlation may not apply in future changing market conditions,<sup>42</sup> FICC believes that it would be prudent to apply a VaR Floor that is based upon the market value of the gross unsettled positions in the Netting Member's portfolio in order to protect FICC against such risk in the event that FICC is required to liquidate a large Netting Member's portfolio in stressed market conditions.

The VaR Floor would be calculated as the sum of the following two components: (1) a U.S. Treasury/Agency bond margin floor and (2) a mortgage-backed securities margin floor. The U.S. Treasury/Agency bond margin floor would be calculated by mapping each U.S. Treasury/Agency security to a tenor bucket, then multiplying the gross positions of each tenor bucket by its bond floor rate, and summing the results. The bond floor rate of each tenor bucket would be a fraction (which would be initially set at 10%) of an index-based haircut rate for such tenor bucket. The mortgage-backed securities margin floor would be calculated by multiplying the gross market value of the total value of mortgage-backed securities in a Netting Member's portfolio by a designated amount, referred to as the pool floor rate, (which would be initially set at 0.05%).<sup>43</sup> GSD would evaluate the appropriateness of the proposed initial floor rates (e.g., the 10% of the benchmark haircut rate for U.S. Treasury/Agency securities and 0.05% for mortgage-backed securities) at least annually based on backtesting performance and risk tolerance considerations.

## **6. Mitigating Risks of Concentrated Positions**

For the reasons described above, FICC believes that the proposed changes to GSD's VaR Charge calculation would allow it to better measure and mitigate the risks presented within Netting Members' portfolios.

One of the risks presented by unsettled positions concentrated in an asset class is that FICC may not be able to liquidate or hedge the unsettled positions of a defaulted Netting

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<sup>42</sup> For example, and without limitation, certain securities may have highly correlated historical price returns, but if future market conditions were to substantially change, these historical correlations could break down, leading to model-generated offsets that would not adequately capture a portfolio's risk.

<sup>43</sup> For example, assume the pool floor rate is set to 0.05% and the bond floor rate is set to 10% of haircut rates. Further assume that a Netting Member has a portfolio with gross positions of \$2 billion in mortgage-backed securities and gross positions of U.S. Treasury/Agency securities that fall into two tenor buckets – \$2 billion in tenor bucket "A" and \$3 billion in tenor bucket "B." If the haircut rate for tenor bucket "A" is 1% and the haircut rate for tenor bucket "B" is 2%, then the bond floor rate would be 0.1% and 0.2%, respectively. Therefore, the resulting VaR Floor would be \$9 million (i.e.,  $([0.05\%]*[\$2 \text{ billion}]) + [0.1\%]*[\$2 \text{ billion}] + ([0.2\%]*[\$3 \text{ billion}])$ ). If the VaR model charge is less than \$9 million, then the VaR Floor calculation of \$9 million would be set as the VaR Charge.

Member in the assumed timeframe at the market price in the event of such Netting Member's default. Because FICC relies on external market data in connection with monitoring exposures to its Netting Members, the market data may not reflect the market impact transaction costs associated with the potential liquidation as the concentration risk of an unsettled position increases. However, FICC believes that, through the proposed changes and through existing risk management measures,<sup>44</sup> it would be able to effectively measure and mitigate risks presented when a Netting Member's unsettled positions are concentrated in a particular security.

FICC will continue to evaluate its exposures to these risks. Any future proposed changes to the margin methodology to address such risks would be subject to a separate proposed rule change pursuant Rule 19b-4 of the Act,<sup>45</sup> and/or an advance notice pursuant to Section 806(e)(1) of the Clearing Supervision Act<sup>46</sup> and the rules thereunder.

### **C. Proposed change to establish the Blackout Period Exposure Adjustment as a component to the Required Fund Deposit calculation**

FICC is proposing to add a new component to the Required Fund Deposit calculation that would be applied to the VaR Charge for all GCF Counterparties with GCF Repo Transactions collateralized with mortgage-backed securities during the monthly Blackout Period (the "Blackout Period Exposure Adjustment"). FICC is proposing this new component because it would better protect FICC and its Netting Members from losses that could result from overstated values of mortgage-backed securities pledged as collateral for GCF Repo Transactions during the Blackout Period.

The proposed Blackout Period Exposure Adjustment would be in the form of a charge that is added to the VaR Charge or a credit that would reduce the VaR Charge. The proposed Blackout Period Exposure Adjustment would be calculated by (1) projecting an average pay-down rate for the government sponsored enterprises (Fannie Mae and Freddie Mac) and the Government National Mortgage Association (Ginnie Mae), respectively, then (2) multiplying the projected pay-down rate<sup>47</sup> by the net positions of mortgage-backed securities in the related

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<sup>44</sup> For example, pursuant to existing authority under GSD Rule 4, FICC has the discretion to calculate an additional amount ("special charge") applicable to a Margin Portfolio as determined by FICC from time to time in view of market conditions and other financial and operational capabilities of the Netting Member. FICC shall make any such determination based on such factors as FICC determines to be appropriate from time to time. See GSD Rule 4, supra note 1.

<sup>45</sup> See 17 CFR 240.19b-4.

<sup>46</sup> See 12 U.S.C. 5465(e)(1).

<sup>47</sup> GSD would calculate the projected average pay-down rates each month using historical pool factor pay-down rates that are weighted by historical positions during each of the prior three months. Specifically, the projected pay-down rate for a current Blackout

program, and (3) summing the results from each program. Because the projected pay-down rate would be an average of the weighted averages of pay-down rates for all active mortgage pools of the related program during the three most recent preceding months, it is possible that the proposed Blackout Period Exposure Adjustment could overestimate the amount for a GCF Counterparty with a portfolio that primarily includes slower paying mortgage-backed securities or underestimate the amount for a GCF Counterparty with a portfolio that primarily includes faster paying mortgage-backed securities. However, FICC believes that projecting the pay-down rate separately for each program and weighting the results by recently active pools would reduce instances of large under/over estimation. FICC would continue to monitor the realized pay-down against FICC's weighted average pay-down rates and its vendor's projected pay-down rates as part of the model performance monitoring. Further, in the event that a GCF Counterparty continues to experience backtesting deficiencies, FICC would apply a Backtesting Charge, which as described in section F below, would be amended to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.<sup>48</sup>

The proposed Blackout Period Exposure Adjustment would only be imposed during the Blackout Period and it would be applied as of the morning Clearing Fund call on the Record Date through and including the intraday Clearing Fund call on the Factor Date, or until the Pool Factors<sup>49</sup> have been updated to reflect the current month's Pool Factors in the GCF Clearing Agent Bank's collateral reports.

#### **D. Proposed change to eliminate the existing Blackout Period Exposure Charge**

FICC would eliminate the existing Blackout Period Exposure Charge<sup>50</sup> because the proposed Blackout Period Exposure Adjustment (which is described in section C above) would

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Period would be an average of the weighted averages of pay-down rates for all active mortgage pools of the related program during the three most recent preceding months.

<sup>48</sup> The proposed changes to the Backtesting Charge are described below in section F – *Proposed change to amend the Backtesting Charge to (i) include backtesting deficiencies attributed to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period and (ii) give GSD the authority to assess a Backtesting Charge on an intraday basis.*

<sup>49</sup> Pursuant to the GSD Rules, the term “Pool Factor” means, with respect to the Blackout Period, the percentage of the initial principal that remains outstanding on the mortgage loan pool underlying a mortgage-backed security, as published by the government-sponsored entity that is the issuer of such security. See GSD Rule 1, supra note 1.

<sup>50</sup> Pursuant to the GSD Rules, FICC imposes a Blackout Period Exposure Charge when FICC determines, based on prior backtesting deficiencies of a GCF Counterparty's Required Fund Deposit, that the GCF Counterparty may experience a deficiency due to

be applied to *all* GCF Counterparties with GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period. The existing Blackout Period Exposure Charge, on the other hand, *only* applies to GCF Counterparties that have two or more backtesting deficiencies during the Blackout Period and whose overall 12-month trailing backtesting coverage falls below the 99% coverage target.<sup>51</sup> FICC believes that the Blackout Period Exposure Charge would no longer be necessary because the applicability of the proposed Blackout Period Exposure Adjustment would better estimate potential changes to the GCF Repo Transactions and help to ensure that GCF Counterparties' with GCF Repo Transactions collateralized with mortgage-backed securities maintain a backtesting coverage above the 99% confidence level. Further, in the event that a GCF Counterparty continues to experience backtesting deficiencies, FICC would apply a Backtesting Charge, which as described in section F below, would be amended to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.<sup>52</sup>

**E. Proposed change to eliminate the Coverage Charge component from the Required Fund Deposit calculation**

FICC is proposing to eliminate the Coverage Charge component from GSD's Required Fund Deposit calculation.<sup>53</sup> The Coverage Charge component is based on historical portfolio activity, which may not be indicative of a Netting Member's current risk profile, but was determined by FICC to be appropriate to address potential shortfalls in margin charges under the current VaR model. FICC is proposing to eliminate the Coverage Component because its analysis indicates that the sensitivity approach would provide overall better margin coverage.

As part of the development and assessment of the proposed VaR Charge, FICC backtested the model's performance and analyzed the impact of the margin changes. Results of the analysis indicated that the proposed sensitivity approach would be more responsive to changing market dynamics and a Netting Member's portfolio composition coverage than the existing VaR model that utilizes the full revaluation approach. The backtesting analysis also demonstrated that the proposed sensitivity approach would provide sufficient margin coverage on a standalone basis. Additionally, in the event that FICC observes unexpected deficiencies in

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reductions in the notional value of the mortgage-backed securities used by such GCF Counterparty to collateralize its GCF Repo trading activity that occur during the monthly Blackout Period. See GSD Rules 1 and 4, supra note 1.

<sup>51</sup> See GSD Rules 1 and 4, supra note 1.

<sup>52</sup> The proposed changes to the Backtesting Charge are described below in section F – *Proposed change to amend the Backtesting Charge to (i) include backtesting deficiencies attributed to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period and (ii) give GSD the authority to assess a Backtesting Charge on an intraday basis.*

<sup>53</sup> See GSD Rules 1 and 4, supra note 1.

the backtesting of a Netting Member's Required Fund Deposit, the Backtesting Charge would apply.<sup>54</sup> Given the above, FICC believes the Coverage Charge would no longer be necessary.

**F. Proposed change to amend the Backtesting Charge to (i) include backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period and (ii) give GSD the authority to assess a Backtesting Charge on an intraday basis**

FICC is proposing to amend the Backtesting Charge to (i) include backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period and (ii) give GSD the authority to assess a Backtesting Charge on an intraday basis.

- (i) *Proposed change to amend the Backtesting Charge to include backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period*

FICC is proposing to amend the Backtesting Charge to provide that this charge would be applied to a GCF Counterparty that experiences backtesting deficiencies that are attributed to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period. Currently, Backtesting Charges are not applied to GCF Counterparties with collateralized mortgage-backed securities during the Blackout Period because such counterparties may be subject to a Blackout Period Exposure Charge. However, now that FICC is proposing to eliminate the Blackout Period Exposure Charge, FICC is proposing to amend the applicability of the Backtesting Charge in the circumstances described above.

- (ii) *Proposed change to give GSD the authority to assess a Backtesting Charge on an intraday basis*

FICC is also proposing to amend the Backtesting Charge to provide that this charge may be assessed if a Netting Member is experiencing backtesting deficiencies during the trading day (i.e., intraday) because of such Netting Member's large fluctuations of intraday trading activities. A Backtesting Charge that is imposed intraday would be referred to as a "Intraday Backtesting Charge." The Intraday Backtesting Charge would be assessed on an intraday basis and it would increase a Netting Member's Required Fund Deposit to help ensure that its intraday backtesting coverage achieves the 99% confidence level.

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<sup>54</sup> Similar to the Coverage Charge, the purpose of the Backtesting Charge is to address potential shortfalls in margin charges, however, the Coverage Charge considers the backtesting results of only the VaR Charge (including the augmented volatility adjustment multiplier) and mark-to-market.

The proposed assessment of the Intraday Backtesting Charge differs from the existing assessment of the Backtesting Charge because the existing assessment is based on the backtesting results of a Netting Member's PM RFD versus the historical returns of such Netting Member's portfolio at the end of the trading day while the proposed Intraday Backtesting Charge would be based on the most recent Required Fund Deposit amount that was collected from a Netting Member versus the historical returns of such Netting Member's portfolio intraday.

In an effort to differentiate the proposed Intraday Backtesting Charge from the existing Backtesting Charge, FICC is proposing to change the name of the existing Backtesting Charge to "Regular Backtesting Charge." The Intraday Backtesting Charge and the Regular Backtesting Charge would collectively be referred to as the Backtesting Charge.

#### *Calculation and assessment of Intraday Backtesting Charges*

FICC would use a snapshot of each Netting Member's portfolio during the trading day,<sup>55</sup> and compare each Netting Member's AM RFD with the simulated liquidation gains/losses using an intraday snapshot of the actual positions in the Netting Member's portfolio, and the actual historical security returns. FICC would review portfolios with intraday backtesting deficiencies that bring the results for that Netting Member below the 99% confidence level (i.e., greater than two intraday backtesting deficiency days in a rolling twelve-month period) and determine whether there is an identifiable cause of ongoing repeat backtesting deficiencies. FICC would also evaluate whether multiple Netting Members are experiencing backtesting deficiencies due to similar underlying reasons.

As is the case with the existing Backtesting Charge (which would be referred to as the "Regular Backtesting Charge"), the proposed Intraday Backtesting Charge would be assessed on Netting Members with portfolios that experience at least three intraday backtesting deficiencies over the prior 12-month period. The proposed Intraday Backtesting Charge would generally equal a Netting Member's third largest historical intraday backtesting deficiency because FICC believes that an Intraday Backtesting Charge equal to the third largest historical intraday backtesting deficiency would bring the affected Netting Member's historically observed intraday backtesting coverage above the 99% confidence level.

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<sup>55</sup> The snapshot would occur once a day. The timing of the snapshot would be subject to change based upon market conditions and/or settlement activity. This snapshot would be taken at the same time for all Netting Members. All positions that have settled would be excluded. FICC would take additional intraday snapshots and/or change the time of the intraday snapshot based upon market conditions. FICC would include the positions from the start-of-day plus any additional positions up to that time.

FICC would have the discretion to adjust the Intraday Backtesting Charge to an amount that is more appropriate for maintaining such Netting Member's intraday backtesting results above the 99% coverage threshold.<sup>56</sup>

In the event that FICC determines that an Intraday Backtesting Charge should apply in the circumstances described above, FICC would notify the affected Netting Member prior to its assessment of the charge. As is the case with the existing application of the Backtesting Charge, FICC would notify Netting Members on or around the 25th calendar day of the month.

The proposed Intraday Backtesting Charge would be applied to the affected Netting Member's Required Fund Deposit on a daily basis for a one-month period. FICC would review the assessed Intraday Backtesting Charge on a monthly basis to determine if the charge is still applicable and that the amount charged continues to provide appropriate coverage. In the event that an affected Netting Member's trailing 12-month intraday backtesting coverage exceeds 99% (without taking into account historically imposed Intraday Backtesting Charges), the Intraday Backtesting Charge would be removed.

**G. Proposed change to the Excess Capital Premium calculation for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members**

FICC is proposing to move to a net capital measure for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members that would align the Excess Capital Premium for such Members to a measure that is consistent with the equity capital measure that is used for Bank Netting Members in the Excess Capital Premium calculation.

Currently, the Excess Capital Premium is determined based on the amount that a Netting Member's Required Fund Deposit exceeds its Excess Capital.<sup>57</sup> Only Netting Members that are brokers or dealers registered under Section 15 of the Act are required to report Excess Net Capital figures to FICC while other Netting Members report net capital or equity capital. If a Netting Member is not a broker/dealer, FICC would use net capital or equity capital, as applicable (based on the type of regulation that such Netting Member is subject to) in order to calculate its Excess Capital Premium.

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<sup>56</sup> For example, FICC may consider whether the affected Netting Member would be likely to experience future intraday backtesting deficiencies, the estimated size of such deficiencies, material differences in the three largest intraday backtesting deficiencies observed over the prior 12-month period, variabilities in its net settlement activity subsequent to GSD's collection of the AM RFD, seasonality in observed intraday backtesting deficiencies and observed market price volatility in excess of its historical VaR Charge.

<sup>57</sup> Pursuant to the GSD Rules, the term "Excess Capital" means Excess Net Capital, net assets or equity capital as applicable, to a Netting Member based on its type of regulation. See GSD Rule 1, supra note 1.

FICC is proposing this change because of the Commission's amendments to Rule 15c3-1 (the "Net Capital Rule"), which were adopted in 2013.<sup>58</sup> The amendments are designed to promote a broker/dealer's capital quality and require the maintenance of "net capital" (i.e., capital in excess of liabilities) in specified amounts as determined by the type of business conducted. The Net Capital Rule is designed to ensure the availability of funds and assets (including securities) in the event that a broker/dealer's liquidation becomes necessary. The Net Capital Rule represents a net worth perspective, which is adjusted by unrealized profit or loss, deferred tax provisions, and certain liabilities as detailed in the rule. It also includes deductions and offsets, and requires that a broker/dealer demonstrate compliance with the Net Capital Rule including maintaining sufficient net capital at all times (including intraday).

FICC believes that the Net Capital Rule is an effective process of separating liquid and illiquid assets, and computing a broker/dealer's regulatory net capital that should replace GSD's existing practice of using Excess Net Capital (which is the difference between the Net Capital and the minimum regulatory Net Capital) as the basis for the Excess Capital Premium.

#### **H. GSD's existing calculation and assessment of Intraday Supplemental Fund Deposit amounts**

Separate and apart from the AM RFD and the PM RFD, the GSD Rules give FICC the existing authority to collect Intraday Supplemental Fund Deposits from Netting Members.<sup>59</sup> Through this filing, FICC is providing transparency with respect to GSD's existing calculation of Intraday Supplemental Fund Deposit amounts.

Pursuant to the GSD Rules, the Intraday Supplemental Fund Deposits is determined based on GSD's observations of a Netting Member's simulated VaR Charge as it is re-calculated throughout the trading day based on the open positions of such Member's portfolio at designated times (the "Intraday VaR Charge").<sup>60</sup> FICC is proposing to provide transparency with respect to its existing authority to calculate and assess the Intraday Supplemental Fund Deposit as described in further detail below.

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<sup>58</sup> See 17 CFR 240.15c3-1. Securities Exchange Act Release No. 34-70072 (July 30, 2013), 78 FR 51823 (August 21, 2013) (File No. S7-08-07).

<sup>59</sup> As described above in section A. - *The Required Fund Deposit and Clearing Fund Calculation Overview*, GSD calculates and collects each Netting Member's Required Fund Deposit twice each business day. The AM RFD is collected at 9:30 a.m. (E.T.) and is comprised of a VaR Charge that is based on each Netting Member's portfolio at the end of the trading day. The PM RFD is collected at 2:45 p.m. and is comprised of a VaR Charge that is based on a snapshot of each Netting Member's portfolio collected at noon and, if applicable, an Intraday Supplemental Fund Deposit collected after noon.

<sup>60</sup> See Rule 4 Section 2a, *supra* note 1.

The Intraday Supplemental Fund Deposit is designed to mitigate exposure to GSD that results from large fluctuations in a Netting Member's portfolio due to new and settled trade activities that are not otherwise covered by a Netting Member's recently collected Required Fund Deposit. FICC determines whether to assess an Intraday Supplemental Fund Deposit by tracking three criteria (each, a "Parameter Break") for each Netting Member. The first Parameter Break evaluates whether a Netting Member's Intraday VaR Charge equals or exceeds a set dollar amount (as determined by FICC from time to time) when compared to the VaR Charge that was included in the most recently collected Required Fund Deposit including, any subsequently collected Intraday Supplemental Fund Deposit (the "Dollar Threshold"). The second Parameter Break evaluates whether the Intraday VaR Charge equals or exceeds a percentage increase (as determined by FICC from time to time) of the VaR Charge that was included in the most recently collected Required Fund Deposit including, if applicable, any subsequently collected Intraday Supplemental Fund Deposit (the "Percentage Threshold"). The third Parameter Break evaluates whether a Netting Member is experiencing backtesting results below the 99% confidence level (the "Coverage Target").

*a) The Dollar Threshold*

The purpose of the Dollar Threshold is to identify Netting Members with additional risk exposures that represent a substantial portion of the Clearing Fund. FICC believes these Netting Members pose an increased risk of loss to GSD because the coverage provided by the Clearing Fund (which is designed to cover the aggregate losses of all Netting Members' portfolios) would be substantially impacted by large exposures. In other words, in the event that a Netting Member's Required Fund Deposit is not sufficient to satisfy losses to GSD caused by the liquidation of the defaulted Netting Member's portfolio, FICC will use the Clearing Fund to satisfy such losses. However, because the Clearing Fund must be available to satisfy potential losses that may arise from any Netting Member's defaults, GSD will be exposed to a significant risk of loss if a defaulted Netting Member's additional risk exposure accounted for a substantial portion of the Clearing Fund.

The Dollar Threshold is set to an amount that would help to ensure that the aggregate additional risk exposure of all Netting Members does not exceed 5% of the Clearing Fund. FICC believes that the availability of at least 95% of the Clearing Fund to satisfy all other liquidation losses caused by a defaulted Netting Member is sufficient to mitigate risks posed to FICC by such losses.

Currently, the Dollar Threshold equals a change in a Netting Member's Intraday VaR Charge that equals or exceeds \$1,000,000 when compared to the VaR Charge that was included in the most recently collected Required Fund Deposit including, if applicable, any subsequently collected Intraday Supplemental Fund Deposit. On an annual basis, FICC assesses the sufficiency of the Dollar Threshold, and may adjust the Dollar Threshold if FICC determines that an adjustment is necessary to provide GSD with reasonable coverage.

*b) The Percentage Threshold*

The purpose of the Percentage Threshold is to identify Netting Members with Intraday VaR Charge amounts that reflect significant changes when such amounts are compared to the

VaR Charge that was included as a component in such Netting Member's most recently collected Required Fund Deposit. FICC believes that these Netting Members pose an increased risk of loss to GSD because the most recently collected VaR Charge (which is designed to cover estimated losses to a portfolio over a three-day liquidation period at least 99% of the time) may not adequately reflect a Netting Member's portfolio with such Netting Member's significant intraday changes in additional risk exposure. Thus, in the event that the Netting Member defaults during the trading day the Netting Member's most recently collected Required Fund Deposit may be insufficient to cover the liquidation of its portfolio within a three-day liquidation period.

Currently, the Percentage Threshold is equal to a Netting Member's Intraday VaR Charge that equals or exceeds 100% of the most recently calculated VaR Charge included in the most recently collected Required Fund Deposit including, if applicable, any subsequently collected Intraday Supplemental Fund Deposit. On an annual basis, FICC assesses the sufficiency of the Percentage Threshold and may adjust the Percentage Threshold if it determines that such adjustment is necessary to provide GSD with reasonable coverage.

*c) The Coverage Target*

The purpose of the Coverage Target is to identify Netting Members with backtesting results<sup>61</sup> below the 99% confidence level (i.e., greater than two deficiency days in a rolling 12-month period) as reported in the most current month. FICC believes that these Netting Members pose an increased risk of loss to FICC because their backtesting deficiencies demonstrate that GSD's risk-based margin model has not performed as expected based on the Netting Member's trading activity. Thus, the most recently collected Required Fund Deposit might be insufficient to cover the liquidation of a Netting Member's portfolio within a three-day liquidation period in the event that such Member defaults during the trading day.

*d) Assessment and Collection of the Intraday Supplemental Fund Deposits*

In the event that FICC determines that a Netting Member's additional risk exposure breaches all three Parameter Breaks, FICC will assess an Intraday Supplemental Fund Deposit. Should FICC determine that certain market conditions exist<sup>62</sup> FICC would impose an Intraday Supplemental Fund Deposit if a Netting Member's Intraday VaR Charge breaches the Dollar Amount threshold and the Percentage Threshold notwithstanding the fact that the Coverage Target has not been breached by such Netting Member.<sup>63</sup> In addition, during such market

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<sup>61</sup> The referenced backtesting results would only reflect the Backtesting Charge if such charge is collected in the Required Fund Deposit.

<sup>62</sup> Examples include but are not limited to (i) sudden swings in an equity index or (ii) movements in the U.S. Treasury yields and mortgage-backed securities spreads that are outside of historically observed market moves.

<sup>63</sup> In certain market condition, a Netting Member's backtesting coverage may not accurately reflect the risks posed by such Netting Member's portfolio. Therefore, FICC imposes the

conditions, the Dollar Threshold and Percentage Threshold may be reduced if FICC determines a Netting Member's portfolios may present relatively greater risks to FICC since the most recently collected Required Fund Deposit. Any such reduction will not cause the Dollar Threshold to be less than \$250,000 and the Percentage Threshold to be less than 5%.

FICC has the discretion to waive or change<sup>64</sup> Intraday Supplemental Fund Deposit amounts if it determines that a Netting Member's additional risk exposure and/or breach of a Parameter Break does not accurately reflect GSD's exposure to the fluctuations in the Netting Member's portfolio.<sup>65</sup> Given that there are numerous factors that could result in a Netting Member's additional risk exposure and/or breach of a Parameter Break, FICC believes that it is important to maintain such discretion in order to help ensure that the Intraday Supplemental Fund Deposit is imposed only on Netting Members with additional risk exposures that pose a significant level of risk to FICC.

### **I. Delayed implementation of the proposed rule change**

This proposed rule change would become operative 45 business days after the later date of the Commission's notice of no objection to this advance notice filing (the "Advance Notice Filing") and its approval of the related proposed rule change.<sup>66</sup> The delayed implementation is designed to give Netting Members the opportunity to assess the impact that the proposed rule change would have on their Required Fund Deposit.

Prior to the effective date, FICC would add a legend to the GSD Rules to state that the specified changes to the GSD Rules are approved but not yet operative, and to provide the date such approved changes would become operative. The legend would also include the file

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Intraday Supplemental Fund on Netting Members that breach the Dollar Threshold and Percentage Threshold, despite the fact that such Member may not have breached the Coverage Target during certain market conditions.

<sup>64</sup> FICC will not reduce the Intraday Supplemental Fund Deposit if such reduction will cause the Netting Member's most recently collected Required Fund Deposit to decrease. In addition, FICC will not increase the Intraday VaR Charge to an amount that is two times more than a Netting Member's most recently collected Required Fund Deposit.

<sup>65</sup> For example, a Netting Member's breach of the Coverage Target could be due to a shortened backtesting look-back period and/or large position fluctuations caused by trading errors.

<sup>66</sup> On January 12, 2018, FICC filed this Advance Notice Filing as a proposed rule change (SR-FICC-2018-001) with the Commission pursuant to Section 806(e)(1) of the Clearing Supervision Act, 12 U.S.C. 5465(e)(1), and Rule 19b-4(n)(1)(i) under the Act, 17 CFR 240.19b-4(n)(1)(i). A copy of the proposed rule change is available at <http://www.dtcc.com/legal/sec-rule-filings.aspx>.

numbers of the approved proposed rule change and Advance Notice Filing and would state that once operative, the legend would automatically be removed from the GSD Rules.

## **J. Description of the proposed changes to the text of the GSD Rules**

### **1. Proposed changes to GSD Rule 1 (Definitions)**

FICC is proposing to amend the term “Backtesting Charge” to provide that a GCF Counterparty’s backtesting deficiencies attributable to collateralized mortgage-backed securities during the Blackout Period would be considered in FICC’s assessment of the applicability of the charge. FICC is also proposing to amend the definition of the term “Backtesting Charge” to provide that an Intraday Backtesting Charge may be assessed based on the backtesting results of a Netting Member’s intraday portfolio. In order to differentiate the Intraday Backtesting charge from the existing application of the Backtesting Charge, the existing charge would be referred to as the “Regular Backtesting Charge.” As a result of this proposed change, FICC would be permitted to assess an Intraday Backtesting Charge based on a Netting Member’s intraday portfolio and a Regular Backtesting Charge based on a Netting Member’s end of day portfolio. As a result of this proposed change, FICC’s calculation of the Intraday Backtesting Charge and the Regular Backtesting Charge could include deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.

FICC is proposing to add the new defined term “Blackout Period Exposure Adjustment” to define a new component in the Required Fund Deposit calculation. This component would apply to all GCF Counterparties with exposure to mortgage-backed securities in their portfolio during the Blackout Period.

FICC is proposing to delete the term “Blackout Period Exposure Charge.” This component would no longer be necessary because the proposed Blackout Period Exposure Adjustment would be applied to all GCF Counterparties with exposure to mortgage-backed securities in their portfolio.

FICC is proposing to delete the term “Coverage Charge” because this component would be eliminated from the Required Fund Deposit calculation.

FICC is proposing to delete the term “Excess Capital” because FICC is proposing to add the new defined term “Netting Member Capital.”

FICC is proposing to amend the definition of the term “Excess Capital Ratio” to reflect the replacement of “Excess Capital” with “Netting Member Capital.”

FICC is proposing to change the term “Intraday Supplemental Clearing Fund Deposit” to “Intraday Supplemental Fund Deposit” because the latter is consistent with the term that is reflected in GSD Rule 4.

FICC is proposing to amend the term “Margin Proxy” to reflect that the Margin Proxy would be used as an alternative volatility calculation.

FICC is proposing to add the new defined term “Netting Member Capital” to reflect the change to the Net Capital for Broker Netting Members’, Inter-Broker Dealer Netting Members’ and Dealer Netting Members’ calculation of the Excess Capital Ratio.

FICC is proposing to amend the definition of the term “VaR Charge” to establish that (1) the Margin Proxy would be utilized as an alternative volatility calculation in the event that the requisite data used to employ the sensitivity approach is unavailable, and (2) a VaR Floor would be utilized as the VaR Charge in the event that the proposed model based approach yields an amount that is lower than the VaR Floor.

## **2. Proposed changes to GSD Rule 4 (Clearing Fund and Loss Allocation)**

### *Proposed changes to Rule 4 Section 1b*

FICC is proposing to eliminate the reference to “Coverage Charge” because this component would no longer be included in the Required Fund Deposit calculation.

FICC is proposing to add the “Blackout Period Exposure Adjustment” because this would be a new component included in the Required Fund Deposit calculation.

FICC is proposing to eliminate the reference to “Blackout Period Exposure Charge” because this component would no longer be included in the Required Fund Deposit calculation.

FICC is proposing to renumber this section in order to accommodate the above-referenced proposed changes.

FICC is proposing to define “Net Unsettled Position” because it is a defined term in GSD Rule 1.

FICC is proposing to amend this section to state that a haircut method would be utilized based on the historic index volatility model for the purposes of calculating the VaR Charge for classes of securities that cannot be handled by the VaR model’s methodology.

FICC is proposing to delete the paragraph relating to the Margin Proxy because the Margin Proxy would no longer be used to supplement the VaR Charge.

## **K. Description of the QRM Methodology**

The QRM Methodology document provides the methodology by which FICC would calculate the VaR Charge with the proposed sensitivity approach as well as other components of the Required Fund Deposit calculation. The QRM Methodology document specifies (i) the model inputs, parameters, assumptions and qualitative adjustments, (ii) the calculation used to generate Required Fund Deposit amounts, (iii) additional calculations used for benchmarking and monitoring purposes, (iv) theoretical analysis, (v) the process by which the VaR methodology was developed as well as its application and limitations, (vi) internal business requirements associated with the implementation and ongoing monitoring of the VaR methodology, (vii) the model change management process and governance framework (which

includes the escalation process for adding a stressed period to the VaR calculation), (viii) the haircut methodology, (ix) the Blackout Period Exposure Adjustment calculations, (x) intraday margin calculation, and (xi) the Margin Proxy calculation.

## II. Anticipated Effect on and Management of Risks

FICC believes that the proposed change to the Required Fund Deposit calculation, which consists of proposals to (1) change its method of calculating the VaR Charge component, (2) add a new component referred to as the Blackout Period Exposure Adjustment, (3) eliminate the Blackout Period Exposure Charge and the Coverage Charge components, (4) amend the Backtesting Charge component to (i) include the backtesting deficiencies of certain GCF Counterparties during the Blackout Period and (ii) give GSD the ability to assess the Backtesting Charge on an intraday basis for all Netting Members, and (5) amend the calculation for determining the Excess Capital Premium for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members, would enable FICC to better limit its exposure to Netting Members arising out of the activity in their portfolios.

### A. **Proposed changes to GSD's calculation of the VaR Charge**

#### 1. **Proposed change to replace the full revaluation approach with the sensitivity approach**

FICC's proposal to change the existing VaR methodology from one that employs a full revaluation approach to one that employs a sensitivity approach would affect FICC's management of risk by addressing the deficiencies observed in the current model by leveraging external vendor expertise in supplying the market risk attributes that would then be incorporated by FICC into its model to calculate the VaR Charge to Members. The proposed methodology would enhance FICC's risk management capabilities because it would enable sensitivity analysis of key model parameters and assumptions. The sensitivity approach would allow FICC to attribute market price moves to various risk factors (such as key rates, agency spread, and mortgage basis) that would enable FICC to view and respond more effectively to market volatility.

As noted above, the proposed sensitivity approach would leverage external vendor expertise in supplying the market risk attributes. FICC would manage the risks associated with a potential data disruption by using the most recently available data on the first day that a data disruption occurs. If it is determined that the vendor would resume providing data within five (5) business days, FICC management would determine whether the VaR Charge should continue to be calculated by using the most recently available data along with an extended look-back period or whether the Margin Proxy should be invoked.

#### 2. **Proposed change to amend the VaR Charge to eliminate the augmented volatility adjustment multiplier.**

FICC's proposal to eliminate the augmented volatility adjustment multiplier would affect FICC's management of risk because the augmented volatility adjustment multiplier would no longer be necessary given that the proposed sensitivity approach would have a longer look-back period and the ability to include an additional stressed market condition to account for periods of

market volatility. As described in Item 10.I. above, the proposed sensitivity approach would provide FICC with the ability to leverage a 10-year look-back period plus, to the extent applicable, an additional stressed period for purposes of calculating the VaR Charge. FICC's ability to extend the look back period would help to ensure that the historical simulation contains a sufficient number of market conditions (including but not limited to stressed market conditions), which would allow FICC to manage risks by more effectively capturing the risk profile of Netting Members during times of market stress.

**3. Proposed change to implement the Margin Proxy as the VaR Charge during a vendor data disruption**

FICC's proposal to employ the Margin Proxy as an alternative volatility calculation rather than as a minimum volatility calculation would affect FICC's management of risk by helping to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model.

As described in Item 10.I. above, if the vendor fails to provide any data or a significant portion of the data timely, FICC would use the most recently available data on the first day that such data disruption occurs. If it is determined that the vendor will resume providing data within five (5) business days, FICC management would determine whether the VaR Charge should continue to be calculated by using the most recently available data along with an extended look-back period or whether the Margin Proxy should be invoked, subject to the approval of DTCC's Group Chief Risk Officer or his/her designee. If it is determined that the data disruption will extend beyond five (5) business days, the Margin Proxy would be applied, subject to the approval of the MRC followed by notification to FICC's Board Risk Committee.

**4. Proposed change to utilize a haircut method to measure the risk exposure of securities that lack historical data**

FICC's proposal to implement a haircut method for securities that lack sufficient historical information would affect FICC's management of risk because the proposed change would better describe FICC's method of capturing the risk profile of these securities, thus helping to ensure that sufficient margin would be calculated for the related portfolios. FICC would continue to manage the market risk of clearing securities with inadequate historical data by conducting analysis on the type of securities that do not fall within the historical look-back period of the proposed VaR model and engaging in periodic reviews of the haircuts used for calculating margin for these types of securities.

**5. Proposed change to amend the VaR Charge calculation to establish a VaR Floor**

FICC's proposal to implement the VaR Floor would affect FICC's management of risk because the proposed VaR Floor would address a risk that the proposed sensitivity approach could calculate a VaR Charge that is too low in connection with certain portfolios where the proposed VaR model applies substantial risk offsets among long and short positions in different classes of securities that have historical price correlation. Since this level of historical price

correlation may not apply in future changing market conditions, FICC believes that it is prudent to apply a VaR Floor that is based upon the market value of the gross of unsettled positions in the Netting Member's portfolio. The VaR Floor would therefore provide GSD with sufficient margin in the event that FICC is required to liquidate in different market conditions.

**B. Proposed change to establish the Blackout Period Exposure Adjustment as a component to the Required Fund Deposit calculation**

FICC's proposal to establish the Blackout Period Exposure Adjustment would affect FICC's management of risk because the Blackout Period Exposure Adjustment would better protect GSD and its Netting Members from losses that could result from overstated values of mortgage-backed securities pledged as collateral for GCF Repo Transactions during the Blackout Period. FICC believes that the proposed adjustment would help to maintain GCF Counterparties' backtesting coverage above the 99% confidence threshold because the proposed Blackout Period Exposure Adjustment would be applied to the VaR Charge for all GCF Counterparties with GCF Repo Transactions collateralized with mortgage-backed securities during the monthly Blackout Period. In the event that a GCF Counterparty continues to experience backtesting deficiencies, FICC would apply the existing Backtesting Charge pursuant to the GSD Rules, which would be amended to consider deficiencies attributable to Blackout Period exposures during the Blackout Period.

**C. Proposed change to eliminate the Coverage Charge from the Required Fund Deposit calculation**

FICC's proposal to eliminate the Coverage Charge component from GSD's Required Fund Deposit calculation would affect FICC's management of risk because the proposed change would remove an unnecessary component from the Required Fund Deposit calculation. As above, the Coverage Charge is based on historical portfolio activity, which may not be indicative of a Netting Member's current risk profile but was determined by FICC to be appropriate to address potential shortfalls in margin charges under the current VaR model. As part of FICC's development and assessment of the proposed VaR Charge, FICC obtained an independent validation of the proposed model by an external party, performed back testing to validate model performance, and conducted analysis to determine the impact of the changes to Netting Members. Results of the analysis indicate that the proposed sensitivity approach would be more responsive to changing market dynamics and provide better coverage than the existing full revaluation approach. Given the proposed improvement in model coverage, FICC believes that the Coverage Charge component would no longer be necessary.

**D. Proposed change to eliminate the existing Blackout Period Exposure Charge**

The proposed Blackout Period Exposure Adjustment would allow GSD to eliminate the existing Blackout Period Exposure Charge because the proposed Blackout Period Exposure Adjustment would be applied to all GCF Counterparties with GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period, while the existing Blackout Period Exposure Charge only applies to GCF Counterparties that have two or more backtesting deficiencies that occurred during the Blackout Period and whose overall 12-month

trailing backtesting coverage falls below the 99% coverage target. FICC believes that the proposed Blackout Period Exposure Adjustment would help to maintain GCF Counterparties' backtesting coverage above the 99% confidence threshold. In the event that a GCF Counterparty continues to experience backtesting deficiencies, FICC would apply the existing Backtesting Charge pursuant to the GSD Rules. As described below, the Backtesting Charge would be amended to include deficiencies related to Blackout Period Exposure during the Blackout Period. Given the proposed Blackout Period Exposure Adjustment and the amendment of the Backtesting Charge, FICC believes that the existing Blackout Period Exposure Charge component would no longer be necessary.

**E. Proposed change to expand GSD's authority to assess the Backtesting Charge and amend the charge during the Blackout Period**

FICC's proposal to assess an Intraday Backtesting Charge on a Netting Member's portfolio during the trading day would affect FICC's management of risk because it would address the risk that a Netting Member's most recently collect Required Fund Deposit may be insufficient to cover its intraday trading activity. Thus, the proposed change would give FICC the ability to better limit its credit exposures to Netting Members on an intraday basis.

FICC's proposal to amend the charge to consider deficiencies attributable to Blackout Period exposures would be included only during the Blackout Period would address the risk that a defaulted GCF Counterparty's portfolio contains exposure to GCF Transactions collateralized with mortgage-backed securities that is not adequately captured by the GCF Counterparty's Required Fund Deposit. Thus, the proposed change would allow FICC to continue to maintain coverage of FICC's credit exposures to such GCF Repo Participant at a high degree of confidence during the period when this risk regarding the valuation of such GCF Transactions could exist.

**F. Proposed change to the Excess Capital Premium calculation for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting**

FICC believes that the proposed change to move to a net capital measure for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members would affect FICC's management of risk because the proposed change would better align the Excess Capital Premium for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members to a measure that would be consistent with the equity capital measure that is currently used for Bank Netting Members in the Excess Capital Premium calculation, while continuing to provide an effective means to manage risks posed by a Netting Member whose activity causes it to have VaR Charge that is greater than its regulatory capital.

**G. GSD's existing calculation and assessment of Intraday Supplemental Fund Deposit amounts**

FICC's proposal to provide transparency with respect to GSD's current practice of calculating Intraday Supplemental Fund Deposits would affect FICC's management of risk because it would help Netting Members understand the process and circumstances under which

GSD may collect Intraday Supplemental Fund Deposit from Netting Members. The collection of Intraday Supplemental Fund Deposits is designed to mitigate FICC's exposure resulting from large intraday fluctuations in Netting Members' portfolios due to new and settled trade activities.

## H. FICC's Outreach to GSD Netting Members

FICC managed the effect of the overall proposal by conducting extensive outreach with Netting Members regarding the proposed changes, educating Netting Members on the reasons for these proposed changes, and explaining the related risk management improvements. FICC invited all Netting Members to customer forums in an effort to provide transparency regarding the changes and the expected macro impact across the membership. FICC also provided each Netting Member with individual impact studies. In addition, prior to the implementation of the proposed changes, FICC would run a parallel period during which Netting Members would have the opportunity to further review the possible impact.

### III. Consistency with the Clearing Supervision Act

Although the Clearing Supervision Act does not specify a standard of review for an advance notice, its stated purpose is instructive: to mitigate systemic risk in the financial system and promote financial stability by, among other things, promoting uniform risk management standards for systemically important financial market utilities and strengthening the liquidity of systemically important financial market utilities.<sup>67</sup>

Section 805(a)(2) of the Clearing Supervision Act<sup>68</sup> authorizes the Commission to prescribe risk management standards for the payment, clearing and settlement activities of designated clearing entities, like FICC, and financial institutions engaged in designated activities for which the Commission is the supervisory agency or the appropriate financial regulator. Section 805(b) of the Clearing Supervision Act<sup>69</sup> states that the objectives and principles for the risk management standards prescribed under Section 805(a) shall be to, among other things, promote robust risk management, promote safety and soundness, reduce systemic risks, and support the stability of the broader financial system. The Commission has adopted risk management standards under Section 805(a)(2) of the Clearing Supervision Act<sup>70</sup> and Section 17A of the Exchange Act ("Covered Clearing Agency Standards").<sup>71</sup> The Covered Clearing Agency Standards require registered clearing agencies to establish, implement, maintain, and

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<sup>67</sup> See 12 U.S.C. 5461(b).

<sup>68</sup> See 12 U.S.C. 5464(a)(2).

<sup>69</sup> See 12 U.S.C. 5464(b).

<sup>70</sup> See 12 U.S.C. 5464(a)(2)

<sup>71</sup> See 17 CFR 240.17Ad-22(e).

enforce written policies and procedures that are reasonably designed to meet certain minimum requirements for their operations and risk management practices on an ongoing basis.<sup>72</sup>

(i) **Consistency with Section 805(b) of the Clearing Supervision Act**

For the reasons described below, FICC believes that the proposed changes in this advance notice are consistent with the objectives and principles of these risk management standards as described in Section 805(b) of the Clearing Supervision Act and in the Covered Clearing Agency Standards.

As discussed above, FICC is proposing a number of changes to GSD's Required Fund Deposit calculation – a key tool that FICC uses to mitigate potential losses to FICC associated with liquidating a Netting Member's portfolio in the event of Netting Member default. FICC believes the proposed changes are consistent with promoting robust risk management because they are designed to enable FICC to better limit its exposure to Members in the event of a Member default. Specifically, (1) the proposed change to utilize the sensitivity approach would enable FICC to better limit its exposure to Netting Members because the sensitivity approach would incorporate a broad range of structured risk factors as well as an extended look-back period that would calculate better margin coverage for FICC, (2) the proposed use of the Margin Proxy as an alternative volatility calculation would enable FICC to better limit its exposure to Netting Members because it would help to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model, (3) the proposed haircut method would enable FICC to better limit its exposure to Netting Members because it would provide a better assessment of the risks associated with classes of securities with inadequate historical pricing data, (4) the proposed VaR Floor would enable FICC to better limit its exposure to Netting Members because it would help to ensure that each Netting Member has a minimum VaR Charge in the event that the proposed VaR model utilizing the sensitivity approach yields too low a VaR Charge for such portfolios, (5) the proposal to add the proposed Blackout Period Exposure Adjustment as a new component and the proposal to amend the Backtesting Charge to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period would enable FICC to better limit its exposure to Netting Members because these changes would help to ensure that FICC collects sufficient margin from GCF Counterparties with GCF Repo Transactions collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation during the Blackout Period, (6) the proposed Intraday Backtesting Charge would enable FICC to better limit its exposure to Netting Members because it would help to ensure that FICC collects appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day, and (7) the proposed change to the Excess Capital Premium calculation would enable FICC to better limit its exposure to Netting

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<sup>72</sup>

Id.

Members because it would help to ensure that FICC does not unnecessarily increase its calculation and collection of Required Fund Deposit amounts for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members. Finally, FICC's proposal to eliminate the Blackout Period Exposure Charge, Coverage Charge and augmented volatility adjustment multiplier would enable FICC to eliminate components that do not measure risk as accurately as the proposed and existing risk management measures, as described above.

Therefore, because the proposal is designed to enable FICC to better limit its exposure to Netting Members in the manner described above, FICC believes it is consistent with promoting robust risk management.

Furthermore, FICC believes that the changes proposed in this advance notice are consistent with promoting safety and soundness, which, in turn, is consistent with reducing systemic risks and supporting the stability of the broader financial system, consistent with Section 805(b) of the Clearing Supervision Act.<sup>73</sup> As described in the second paragraph above, the proposed changes are designed to better limit FICC's exposures to Netting Members in the event of a Netting Member default. FICC believes that by better limiting its exposures to Netting Members in the event of a Netting Member's default, the proposed changes are consistent with promoting safety and soundness, which, in turn, is consistent with reducing systemic risks and supporting the stability of the broader financial system.

**(ii) Consistency with Rule 17Ad-22(e)(4)(i) and (e)(6)(i), (ii), (iii), (iv) and (v) under the Act**

FICC believes that the proposed changes listed above are consistent with Rules 17Ad-22(e)(4)(i) and (e)(6)(i), (ii), (iii), (iv) and (v) of the Act.<sup>74</sup>

Rule 17Ad-22(e)(4)(i) under the Act<sup>75</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to effectively identify, measure, monitor, and manage its credit exposures to participants and those exposures arising from its payment, clearing, and settlement processes by maintaining sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence.

FICC believes that the proposed changes described in Item 10.I. above enhance FICC's ability to identify, measure, monitor and manage its credit exposures to Netting Members and those exposures arising from its payment, clearing, and settlement processes because the proposed changes would collectively help to ensure that FICC maintains sufficient financial resources to cover its credit exposure to each Netting Member with a high degree of confidence.

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<sup>73</sup> See 12 U.S.C. 5464(b).

<sup>74</sup> See 17 CFR 240.17Ad-22(e)(4)(i) and (e)(6)(i), (ii), (iii), (iv) and (v).

<sup>75</sup> See 17 CFR 240.17Ad-22(e)(4)(i).

Because each of the proposed changes to FICC's Required Fund Deposit calculation would provide FICC with a more effective measure of the risks that these calculations were designed to assess, the proposed changes would permit FICC to more effectively identify, measure, monitor and manage its exposures to market price risk, and would enable it to better limit its exposure to potential losses from Netting Member default. Specifically, the proposed changes described in Item 10.I. above are designed to help ensure that GSD appropriately calculates and collects margin to cover its credit exposure to each Netting Member with a high degree of confidence because (1) the proposed change to utilize the sensitivity approach would provide better margin coverage for FICC, (2) the proposed use of the Margin Proxy as an alternative volatility calculation would help to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model, (3) the proposed haircut method would provide a better assessment of the risks associated with classes of securities with inadequate historical pricing data, (4) the proposed VaR Floor would limit FICC's credit exposures to Netting Members in the event that the proposed VaR model utilizing the sensitivity approach yields too low a VaR Charge for such portfolios, (5) the proposal eliminates the Blackout Period Exposure, Coverage Charge and augmented volatility adjustment multiplier because FICC should not maintain elements of the prior model that would unnecessarily increase Netting Members' Required Fund Deposits, (6) the proposal to add the proposed Blackout Period Exposure Adjustment as a new component would limit FICC's credit exposures during the Blackout Period caused by GCF Repo Transactions collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation, (7) the proposal to amend the Backtesting Charge to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period would help to ensure that FICC could cover credit exposure to GCF Counterparties, (8) the proposed Intraday Backtesting Charge would help to ensure that FICC collects appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day, and (9) the proposed change to the Excess Capital Premium calculation would help to ensure that FICC does not unnecessarily increase its calculation and collection of Required Fund Deposit amounts for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members.

The proposed changes would continue to be subject to performance reviews by FICC. In the event that FICC's backtesting process reveals that the VaR Charge, Required Fund Deposit amounts and/or the Clearing Fund do not meet FICC's 99% confidence level, FICC would review its margin methodologies and assess whether any changes should be considered. Therefore, FICC believes the proposed changes are consistent with the requirements of Rule 17Ad-22(e)(4)(i) of the Act cited above.

Rule 17Ad-22(e)(6)(i) under the Act<sup>76</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit

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<sup>76</sup> See 17 CFR 240.17Ad-22(e)(6)(i).

exposures to its participants by establishing a risk-based margin system that, at a minimum, considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.

FICC believes that the proposed changes referenced above in the second paragraph of this section (each of which have been described in detail in Item 10.I. above) are consistent with Rule 17Ad-22(e)(6)(i) of the Act cited above because the proposed changes would help to ensure that FICC calculates and collects adequate Required Fund Deposit amounts, and that each Netting Member's amount is commensurate with the risks and particular attributes of each relevant product, portfolio, and market. Specifically, (1) the proposed change to utilize the sensitivity approach would provide better margin coverage for FICC, (2) the proposed use of the Margin Proxy as an alternative volatility calculation would help to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model, (3) the proposed haircut method would provide a better assessment of the risks associated with classes of securities with inadequate historical pricing data, (4) the proposed VaR Floor would limit FICC's credit exposures to Netting Members in the event that the proposed VaR model utilizing the sensitivity approach yields too low a VaR Charge for such portfolios, (5) the proposal eliminates the Blackout Period Exposure, Coverage Charge and augmented volatility adjustment multiplier because FICC should not maintain elements of the prior model that would unnecessarily increase Netting Members' Required Fund Deposits, (6) the proposal to add the proposed Blackout Period Exposure Adjustment as a new component would limit FICC's credit exposures during the Blackout Period caused by GCF Repo Transactions collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation, (7) the proposal to amend the Backtesting Charge to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period would help to ensure that FICC could cover credit exposure to GCF Counterparties, (8) the proposed Intraday Backtesting Charge would help to ensure that FICC collects appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day, and (9) the proposed change to the Excess Capital Premium calculation would help to ensure that FICC does not unnecessarily increase its calculation and collection of Required Fund Deposit amounts for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members.

Therefore, FICC believes that the proposed changes are consistent with the requirements of Rule 17Ad-22(e)(6)(i) cited above because the collective proposed rule changes would consider, and produce margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.

Rule 17Ad-22(e)(6)(ii) under the Act<sup>77</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover

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<sup>77</sup> See 17 CFR 240.17Ad-22(e)(6)(ii).

its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, marks participant positions to market and collects margin, including variation margin or equivalent charges if relevant, at least daily and includes the authority and operational capacity to make intraday margin calls in defined circumstances.

FICC believes that the proposed changes are consistent Rule 17Ad-22(e)(6)(ii) of the Act cited above because the proposed Intraday Backtesting Charge would help to ensure that FICC collects appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day. Therefore, FICC believes that the proposed Intraday Backtesting Charge would provide GSD with the authority and operational capacity to make intraday margin calls in a manner that is consistent with Rule 17Ad-22(e)(6)(ii) of the Act cited above.

Rule 17Ad-22(e)(6)(iii) under the Act<sup>78</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, calculates margin sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default.

FICC believes that the proposed changes are consistent Rule 17Ad-22(e)(6)(iii) of the Act cited above because the proposed changes are designed to calculate Required Fund Deposit amounts that are sufficient to cover FICC's potential future exposure to Netting Members in the interval between the last margin collection and the close out of positions following a participant default. Specifically, (1) the proposed change to utilize the sensitivity approach would provide better margin coverage for FICC, (2) the proposed use of the Margin Proxy as an alternative volatility calculation would help to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model, (3) the proposed haircut method would provide a better assessment of the risks associated with classes of securities with inadequate historical pricing data, (4) the proposed VaR Floor would limit FICC's credit exposures to Netting Members in the event that the proposed VaR model utilizing the sensitivity approach yields too low a VaR Charge for such portfolios, (5) the proposal eliminates the Blackout Period Exposure, Coverage Charge and augmented volatility adjustment multiplier because FICC should not maintain elements of the prior model that would unnecessarily increase Netting Members' Required Fund Deposits, (6) the proposal to add the proposed Blackout Period Exposure Adjustment as a new component would limit FICC's credit exposures during the Blackout Period caused by GCF Repo Transactions collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation, (7) the proposal to amend the Backtesting Charge to consider backtesting deficiencies attributable to GCF Repo Transactions

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<sup>78</sup> See 17 CFR 240.17Ad-22(e)(6)(iii).

collateralized with mortgage-backed securities during the Blackout Period would help to ensure that FICC could cover credit exposure to GCF Counterparties, (8) the proposed Intraday Backtesting Charge would help to ensure that FICC collects appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day, and (9) the proposed change to the Excess Capital Premium calculation would help to ensure that FICC does not unnecessarily increase its calculation and collection of Required Fund Deposit amounts for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members.

Therefore, FICC believes that the proposed changes would be consistent with Rule 17Ad-22(e)(6)(iii) of the Act cited above because the proposed rules changes would collectively be designed to help ensure that FICC calculates Required Fund Deposit amounts that are sufficient to cover FICC's potential future exposure to Netting Members in the interval between the last margin collection and the close out of positions following a participant default.

Rule 17Ad-22(e)(6)(iv) under the Act<sup>79</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, uses reliable sources of timely price data and procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.

FICC believes that the proposed change to implement a haircut method for securities that lack sufficient historical information is consistent with Rule 17Ad-22(e)(6)(iv) of the Act cited above because the proposed change would allow FICC to use appropriate market data to estimate an appropriate margin at a 99% confidence level, thus helping to ensure that sufficient margin would be calculated for portfolios that contain these securities.

Rule 17Ad-22(e)(6)(v) under the Act<sup>80</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, uses an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products.

FICC believes that the proposed changes to implement a haircut method for securities that lack sufficient historical information is consistent with Rule 17Ad-22(e)(6)(v) of the Act cited above because the haircut method would allow FICC to use appropriate market data to estimate an appropriate margin at a 99% confident level, thus helping to ensure that sufficient margin would be calculated for portfolios that contain these securities.

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<sup>79</sup> See 17 CFR 240.17Ad-22(e)(6)(iv).

<sup>80</sup> See 17 CFR 240.17Ad-22(e)(6)(v).

FICC also believes that its proposal to replace the Blackout Period Exposure Charge with the Blackout Period Exposure Adjustment is consistent with Rule 17Ad-22(e)(6)(v) of the Act cited above because the proposed Blackout Period Exposure Adjustment would limit FICC's credit exposures during the Blackout Period caused by portfolios with collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation.

Therefore, FICC believes that the proposed haircut method and the proposed Blackout Period Exposure Adjustment are consistent with Rule 17Ad-22(e)(6)(v) of the Act cited above because the proposed changes appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products.

## **11. Exhibits**

Exhibit 1 – Not applicable.

Exhibit 1A – Notice of advance notice for publication in the Federal Register.

Exhibit 2 – Not applicable.

Exhibit 3a – FICC's backtesting analysis omitted and filed separately with the Commission. Confidential treatment of this Exhibit 3a pursuant to 17 CFR 240.24b-2 being requested.

Exhibit 3b – FICC's impact analysis shows the portfolio level VaR Charge for the period January 3, 2013 - December 30, 2016 omitted and filed separately with the Commission. Confidential treatment of this Exhibit 3b pursuant to 17 CFR 240.24b-2 being requested.

Exhibit 3c – FICC's impact analysis shows the aggregate Required Fund Deposit by Netting Member for the period May 1, 2017 -November 30, 2017 omitted and filed separately with the Commission. Confidential treatment of this Exhibit 3c pursuant to 17 CFR 240.24b-2 being requested.

Exhibit 4 – Not applicable.

Exhibit 5 – Proposed changes to the GSD Rules.

QRM Methodology omitted and filed separately with the Commission. Confidential treatment of this portion of Exhibit 5 pursuant to 17 CFR 240.24b-2 being requested.

**EXHIBIT 1A**

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34- [\_\_\_\_]; File No. SR-FICC-2018-801)

[DATE]

Self-Regulatory Organizations; Fixed Income Clearing Corporation; Notice of Advance Notice Filing of Proposed Changes to the Required Fund Deposit calculation in the Government Securities Division Rulebook

Pursuant to Section 806(e)(1) of Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act entitled the Payment, Clearing, and Settlement Supervision Act of 2010 (“Clearing Supervision Act”)<sup>1</sup> and Rule 19b-4(n)(1)(i) under the Securities Exchange Act of 1934 as amended (“Act”),<sup>2</sup> notice is hereby given that on January \_\_, 2018, Fixed Income Clearing Corporation (“FICC”) filed with the Securities and Exchange Commission (“Commission”) the advance notice SR-FICC-2018-801 (“Advance Notice”) as described in Items I, II and III below, which Items have been prepared by the clearing agency.<sup>3</sup> The Commission is publishing this notice to solicit comments on the Advance Notice from interested persons.

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<sup>1</sup> 12 U.S.C. 5465(e)(1).

<sup>2</sup> 17 CFR 240.19b-4(n)(1)(i).

<sup>3</sup> On January \_\_, 2018, FICC filed this Advance Notice as a proposed rule change (SR-FICC-2018-001) with the Commission pursuant to Section 19(b)(1) of the Act, 15 U.S.C. 78s(b)(1), and Rule 19b-4, 17 CFR 240.19b-4. A copy of the proposed rule change is available at <http://www.dtcc.com/legal/sec-rule-filings.aspx>.

I. Clearing Agency's Statement of the Terms of Substance of the Advance Notice

This Advance Notice consists of amendments to FICC's Government Securities Division ("GSD") Rulebook (the "GSD Rules")<sup>4</sup> in order to propose changes to GSD's method of calculating Netting Members' margin, referred to in the GSD Rules as the Required Fund Deposit amount.<sup>5</sup> Specifically, FICC is proposing to (1) change its method of calculating the VaR Charge component, (2) add a new component referred to as the "Blackout Period Exposure Adjustment" (as defined in Item II.(B)I below), (3) eliminate the Blackout Period Exposure Charge and the Coverage Charge components, (4) amend the Backtesting Charge component to (i) include the backtesting deficiencies of certain GCF Counterparties during the Blackout Period<sup>6</sup> and (ii) give GSD the ability to assess the Backtesting Charge on an intraday basis for all Netting Members, and (5) amend the calculation for determining the Excess Capital Premium for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members. In addition, FICC is proposing to provide transparency with respect to GSD's existing authority to calculate and assess Intraday Supplemental Fund Deposit amounts.<sup>7</sup>

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<sup>4</sup> Available at DTCC's website, [www.dtcc.com/legal/rules-and-procedures.aspx](http://www.dtcc.com/legal/rules-and-procedures.aspx). Capitalized terms used herein and not defined shall have the meaning assigned to such terms in the GSD Rules.

<sup>5</sup> Id. at GSD Rules 1 and 4.

<sup>6</sup> As further discussed in Item II.(B)I. below, the proposed Backtesting Charge would consider a GCF Counterparty's backtesting deficiencies that are attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.

<sup>7</sup> Pursuant to the GSD Rules, FICC has the existing authority and discretion to calculate an additional amount on an intraday basis in the form of an Intraday

FICC has also provided the following documentation to the Commission:

1. Backtesting results that reflect FICC's comparison of the aggregate Clearing Fund requirement ("CFR") under GSD's current methodology and the aggregate CFR under the proposed methodology (as listed in the first paragraph above) to historical returns of end-of-day snapshots of each Netting Member's portfolio for the period May 2016 through October 2017. The CFR backtesting results under the proposed methodology were calculated in two ways for end-of-day portfolios: one set of results included the proposed Blackout Period Exposure Adjustment and the other set of results excluded the proposed Blackout Period Exposure Adjustment.
2. An impact study that shows the portfolio level VaR Charge under the proposed methodology for the period January 3, 2013 through December 30, 2016,<sup>8</sup> and
3. An impact study that shows the aggregate Required Fund Deposit amount by Netting Member for the period May 1, 2017 through November 30, 2017.
4. The GSD Initial Margin Model (the "QRM Methodology") which would reflect the proposed methodology of the VaR Charge calculation and the proposed Blackout Period Exposure Adjustment.

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Supplemental Clearing Fund Deposit. See GSD Rules 1 and 4, Section 2a, supra note 4.

<sup>8</sup> This period includes market stress events such as the U.S. presidential election, United Kingdom's vote to leave the European Union, and the 2013 spike in U.S. Treasury yields which resulted from the Federal Reserve's plans to reduce its balance sheet purchases.

FICC is requesting confidential treatment of the above-referenced backtesting results, impact studies and QRM Methodology, and has filed it separately with the Commission.<sup>9</sup>

II. Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Advance Notice

In its filing with the Commission, the clearing agency included statements concerning the purpose of and basis for the Advance Notice and discussed any comments it received on the Advance Notice. 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 and B below, of the most significant aspects of such statements.

(A) Clearing Agency's Statement on Comments on the Advance Notice Received from Members, Participants, or Others

Written comments relating to the proposed rule changes have not been solicited or received. FICC will notify the Commission of any written comments received by FICC.

(B) Advance Notice Filed Pursuant to Section 806(e) of the Payment, Clearing and Settlement Supervision Act

I. Description of the Change

The purpose of this filing is to amend the GSD Rules to propose changes to GSD's method of calculating Netting Members' margin, referred to in the GSD Rules as the Required Fund Deposit amount. Specifically, FICC is proposing to (1) change its method of calculating the VaR Charge component, (2) add the Blackout Period Exposure Adjustment as a new component, (3) eliminate the Blackout Period Exposure

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<sup>9</sup> See 17 CFR 240-24b-2.

Charge and the Coverage Charge components, (4) amend the Backtesting Charge to (i) consider the backtesting deficiencies of certain GCF Counterparties during the Blackout Period<sup>10</sup> and (ii) give GSD the ability to assess the Backtesting Charge on an intraday basis for all Netting Members, and (5) amend the calculation for determining the Excess Capital Premium for Broker Netting Members, Dealer Netting Members and Inter-Dealer Broker Netting Members.

In addition, FICC is proposing to provide transparency with respect to GSD's existing authority to calculate and assess Intraday Supplemental Fund Deposit amounts.<sup>11</sup>

The proposed QRM Methodology would reflect the proposed methodology of the VaR Charge calculation and the proposed Blackout Period Exposure Adjustment calculation.

**A. *The Required Fund Deposit and Clearing Fund Calculation Overview***

GSD provides trade comparison, netting and settlement for the U.S. Government securities marketplace. Pursuant to the GSD Rules, Netting Members may process the following securities and transaction types through GSD: (1) buy-sell transactions in eligible U.S. Treasury and Agency securities, (2) delivery versus payment repurchase

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<sup>10</sup> As further discussed below, the proposed Backtesting Charge would consider a GCF Counterparty's backtesting deficiencies that are attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.

<sup>11</sup> Pursuant to the GSD Rules, FICC has the existing authority and discretion to calculate an additional amount on an intraday basis in the form of an Intraday Supplemental Clearing Fund Deposit. See GSD Rules 1 and 4, Section 2a, supra note 4.

agreement (“repo”) transactions, where the underlying collateral must be U.S. Treasury securities or Agency securities, and (3) GCF Repo Transactions, where the underlying collateral must be U.S. Treasury securities, Agency securities, or eligible mortgage-backed securities.

A key tool that FICC uses to manage counterparty risk is the daily calculation and collection of Required Fund Deposits from Netting Members.<sup>12</sup> The Required Fund Deposit serves as each Netting Member’s margin. Twice each business day, Netting Members are required to satisfy their Required Fund Deposit by 9:30 a.m. (E.T.) (the “AM RFD”) and 2:45 p.m. (E.T.) (the “PM RFD”). The aggregate of all Netting Members’ Required Fund Deposits constitutes the Clearing Fund of GSD, which FICC would access should a defaulting Netting Member’s own Required Fund Deposit be insufficient to satisfy losses to GSD caused by the liquidation of that Netting Member’s portfolio. The objective of a Netting Member’s Required Fund Deposit is to mitigate potential losses to GSD associated with liquidation of such Member’s portfolio in the event that FICC ceases to act for such Member (hereinafter referred to as a “default”).

As discussed below, a Netting Member’s Required Fund Deposit currently consists of the VaR Charge and, to the extent applicable, the Coverage Charge, the Blackout Period Exposure Charge, the Backtesting Charge, the Excess Capital Premium, and other components.<sup>13</sup>

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<sup>12</sup> See GSD Rules 1 and 4, supra note 4.

<sup>13</sup> Pursuant to the GSD Rules, the Required Fund Deposit calculation may include the following additional components: the Holiday Charge, the Cross-Margining Reduction, the GCF Premium Charge, the GCF Repo Event Premium, the Early Unwind Intraday Charge and the Special Charge. See GSD Rules 1 and 4, supra

**1. GSD's Required Fund Deposit calculation – the VaR Charge component**

The VaR Charge generally comprises the largest portion of a Netting Member's Required Fund Deposit amount. Currently, GSD uses a methodology referred to as the "full revaluation" approach to capture the market price risk associated with the securities in a Netting Member's portfolio. The full revaluation approach uses valuation algorithms to fully reprice each security in a Netting Member's portfolio over a range of historically simulated scenarios. These historical market moves are then used to project the potential gains or losses that could occur in connection with the liquidation of a defaulting Netting Member's portfolio to determine the amount of the VaR Charge, which is calibrated to cover the projected liquidation losses at a 99% confidence level.

The VaR Charge provides an estimate of the possible losses for a given portfolio based on a given confidence level over a particular time horizon. The current VaR Charge is calibrated at a 99% confidence level based on a front-weighted<sup>14</sup> 1-year look-back period assuming a three-day liquidation period.<sup>15</sup> In the event that FICC determines that certain classes of securities in a Netting Member's portfolio (including,

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note 4. FICC is not proposing any changes to these components, thus a description of these components is not included in this rule filing.

<sup>14</sup> A fronted weighted approach means that GSD allows recently observed market data to have more impact on the VaR Charge than older historic market data.

<sup>15</sup> The three-day liquidation period is sometimes referred to as the "margin period of risk" or "closeout-period." This period reflects the time between the most recent collection of the Required Fund Deposit from a defaulting Netting Member and the liquidation of such Netting Member's portfolio. FICC currently assumes that it would take three days to liquidate or hedge a portfolio in normal market conditions.

but not limited to, the repo rate for Term Repo Transactions and Forward-Starting Repo Transactions) are less amenable to statistical analysis,<sup>16</sup> FICC may apply a historic index volatility model rather than the VaR calculation.<sup>17</sup>

In addition to the full revaluation approach that GSD uses to calculate the VaR Charge, GSD also utilizes “implied volatility indicators” among the assumptions and other observable market data as part of its volatility model. Specifically, GSD applies a multiplier (also known as the “augmented volatility adjustment multiplier”) to calculate the VaR Charge. The multiplier is based on the levels of change in current and implied volatility measures of market benchmarks.

FICC also employs a supplemental risk charge referred to as the Margin Proxy.<sup>18</sup> The Margin Proxy is designed to help ensure that each Netting Member’s VaR Charge is adequate and, at the minimum, mirrors historical price moves.

## **2. GSD’s Required Fund Deposit calculation – other components**

In addition to the VaR Charge, a Netting Member’s Required Fund Deposit calculation may include a number of other components including, but not limited to, the

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<sup>16</sup> Certain classes of securities are less amenable to statistical analysis because FICC believes that it does not observe sufficient historical market price data to reliably estimate the 99% confidence level.

<sup>17</sup> See GSD Rule 4 Section 1b(a), *supra* note 4.

<sup>18</sup> The Margin Proxy is currently used to provide supplemental coverage to the VaR Charge, however, pursuant to this rule filing, the Margin Proxy would only be used as an alternative volatility calculation as described below in subsection B.3. – *Proposed change to implement the Margin Proxy as the VaR Charge during a vendor data disruption.*

Coverage Charge, the Blackout Period Exposure Charge, and the Backtesting Charge.<sup>19</sup>

In addition, the Required Fund Deposit may include an Excess Capital Premium charge.<sup>20</sup>

The Coverage Charge is designed to address potential shortfalls<sup>21</sup> in the margin amount calculated by the existing VaR Charge and Funds-Only Settlement.<sup>22</sup> Thus, the Coverage Charge is applied to supplement the VaR Charge to help ensure that a Netting Member's backtesting coverage achieves the 99% confidence level.

The Blackout Period Exposure Charge is applied when FICC determines that a GCF Counterparty has experienced backtesting deficiencies due to reductions in the notional value of the mortgage-backed securities used to collateralize its GCF Repo Transactions during the monthly Blackout Period. This charge is designed to mitigate FICC's exposure resulting from potential decreases in the collateral value of mortgage-backed securities that occur during the monthly Blackout Period.

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<sup>19</sup> See supra note 13.

<sup>20</sup> See GSD Rules 1 and 3, Section 1, supra note 4.

<sup>21</sup> While multiple factors may contribute to a shortfall, shortfalls could be observed based on the mark-to-market change on a Netting Member's positions after the last margin collection.

<sup>22</sup> The Coverage Charge is calculated as the front-weighted average of backtesting coverage deficiencies observed over the prior 100 days. The backtesting coverage deficiencies are determined by comparing (x) the simulated liquidation profit and loss of a Netting Member's portfolio (using actual positions in the Member's portfolio and the actual historical returns on the security positions in the portfolio) to (y) the sum of the VaR Charge and the Funds-Only Settlement Amount (which is the mark-to-market amount) in order to determine whether there would have been any shortfalls between the amounts collected.

The Backtesting Charge is applied when FICC determines that a Netting Member's portfolio has experienced backtesting deficiencies over the prior 12-month period. The Backtesting Charge is designed to mitigate exposures to GSD caused by settlement risks that may not be adequately captured by GSD's Required Fund Deposit.

The Excess Capital Premium is applied to a Netting Member's Required Fund Deposit when its VaR Charge exceeds its Excess Capital. The Excess Capital Premium is designed to more effectively manage a Netting Member's credit risk to GSD that is caused because such Netting Member's trading activity has resulted in a VaR Charge that is greater than its excess regulatory capital.

### **3. GSD's backtesting process**

FICC employs daily backtesting to determine the adequacy of each Netting Member's Required Fund Deposit. Backtesting compares the Required Fund Deposit for each Netting Member with actual price changes in the Netting Member's portfolio. The portfolio values are calculated using the actual positions in a Netting Member's portfolio on a given day and the observed security price changes over the following three days. The backtesting results are reviewed by FICC as part of its performance monitoring and assessment of the adequacy of each Netting Member's Required Fund Deposit. As noted above, a Backtesting Charge may be assessed if GSD determines that a Netting Member's Required Fund Deposit may not fully address the projected liquidation losses estimated from such Netting Member's settlement activity. Similarly, the Coverage Charge may be assessed to address potential shortfalls in the VaR Charge calculation. The Coverage Charge supplements the VaR Charge to help ensure that the Netting Member's backtesting coverage achieves the 99% confidence level. The

Coverage Charge considers the backtesting results of only the VaR Charge (including the augmented volatility adjustment multiplier) and mark-to-market, while the Backtesting Charge considers the total Required Fund Deposit amount.

**B. Proposed changes to GSD's calculation of the VaR Charge**

FICC is proposing to amend its calculation of GSD's VaR Charge because during the fourth quarter of 2016, FICC's current methodology for calculating the VaR Charge did not respond effectively to the market volatility that existed at that time. As a result, the VaR Charge did not achieve backtesting coverage at a 99% confidence level and therefore yielded backtesting deficiencies beyond FICC's risk tolerance. In response, FICC implemented the Margin Proxy to help ensure that each Netting Member's VaR Charge achieves a minimum 99% confidence level and, at the minimum, mirrors historical price moves, while FICC continued the development effort on the proposed sensitivity based approach to remediate the observed model weaknesses.<sup>23</sup>

As a result of FICC's review of GSD's existing VaR model deficiencies, FICC is proposing to: (1) replace the full revaluation approach with the sensitivity approach, (2) eliminate the augmented volatility adjustment multiplier, (3) employ the Margin Proxy as an alternative volatility calculation rather than as a minimum volatility calculation, (4) utilize a haircut method for securities that lack sufficient historical data, and (5) establish a minimum calculation, referred to as the VaR Floor (as defined below in subsection 5), as the minimum VaR Charge. These proposed changes are described in detail below.

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<sup>23</sup> See supra note 18.

**1. Proposed change to replace the full revaluation approach with the sensitivity approach**

FICC is proposing to address GSD's existing VaR model deficiencies by replacing the full revaluation method with the sensitivity approach.<sup>24</sup> The current full revaluation approach uses valuation algorithms to fully reprice each security in a Netting Member's portfolio over a range of historically simulated scenarios. While there are benefits to this method, some of its deficiencies are that it requires significant historical market data inputs, calibration of various model parameters and extensive quantitative support for price simulations.

FICC believes that the proposed sensitivity approach would address these deficiencies because it would leverage external vendor<sup>25</sup> expertise in supplying the market risk attributes, which would then be incorporated by FICC into GSD's model to calculate the VaR Charge. Specifically, FICC would source security-level risk

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<sup>24</sup> GSD's proposed sensitivity approach is similar to the sensitivity approach that FICC's Mortgage-Backed Securities Division ("MBSD") uses to calculate the VaR Charge for MBSD clearing members. See MBSD's Clearing Rules, available at DTCC's website, [www.dtcc.com/legal/rules-and-procedures.aspx](http://www.dtcc.com/legal/rules-and-procedures.aspx). See Securities Exchange Act Release No. 79868 (January 24, 2017) 82 FR 8780 (January 30, 2017) (SR-FICC-2016-007) and Securities Exchange Act Release No. 79643 (December 21, 2016), 81 FR 95669 (December 28, 2016) (SR-FICC-2016-801).

<sup>25</sup> FICC does not believe that its engagement of the vendor would present a conflict of interest because the vendor is not an existing Netting Member nor are any of the vendor's affiliates existing Netting Members. To the extent that the vendor or any of its affiliates submit an application to become a Netting Member, FICC will negotiate an appropriate information barrier with the applicant in an effort to prevent a conflict of interest from arising. An affiliate of the vendor currently provides an existing service to FICC; however, this arrangement does not present a conflict of interest because the existing agreement between FICC and the vendor, and the existing agreement between FICC and the vendor's affiliate each contain provisions that limit the sharing of confidential information.

sensitivity data and relevant historical risk factor time series data from an external vendor for all Eligible Securities.

The sensitivity data would be generated by a vendor based on its econometric, risk and pricing models.<sup>26</sup> Because the quality of this data is an important component of

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<sup>26</sup> The following risk factors would be incorporated into GSD's proposed sensitivity approach: key rate, convexity, implied inflation rate, agency spread, mortgage-backed securities spread, volatility, mortgage basis, and time risk factor. These risk factors are defined as follows:

- key rate measures the sensitivity of a price change to changes in interest rates;
- convexity measures the degree of curvature in the price/yield relationship of key interest rates;
- implied inflation rate measures the difference between the yield on an ordinary bond and the yield on an inflation-indexed bond with the same maturity;
- agency spread is yield spread that is added to a benchmark yield curve to discount an Agency bond's cash flows to match its market price;
- mortgage-backed securities spread is the yield spread that is added to a benchmark yield curve to discount a to-be-announced ("TBA") security's cash flows to match its market price;
- volatility reflects the implied volatility observed from the swaption market to estimate fluctuations in interest rates;
- mortgage basis captures the basis risk between the prevailing mortgage rate and a blended Treasury rate; and
- time risk factor accounts for the time value change (or carry adjustment) over the assumed liquidation period.

The above-referenced risk factors are similar to the risk factors currently utilized in MBSD's sensitivity approach, however, GSD has included other risk factors that are specific to the U.S. Treasury securities, Agency securities and mortgage-backed securities cleared through GSD.

Concerning U.S. Treasury securities and Agency securities, FICC would select the following risk factors: key rates, convexity, agency spread, implied inflation rates, volatility, and time.

For mortgage-backed securities, each security would be mapped to a corresponding TBA forward contract and FICC would use the risk exposure analytics for the TBA as an estimate for the mortgage-backed security's risk

calculating the VaR Charge, FICC would conduct independent data checks to verify the accuracy and consistency of the data feed received from the vendor. With respect to the historical risk factor time series data, FICC has evaluated the historical price moves and determined which risk factors primarily explain those price changes, a practice commonly referred to as risk attribution.

FICC's proposal to use the vendor's risk analytics data requires that FICC take steps to mitigate potential model risk. FICC has reviewed a description of the vendor's calculation methodology and the manner in which the market data is used to calibrate the vendor's models. FICC understands and is comfortable with the vendor's controls, governance process and data quality standards. FICC would conduct an independent review of the vendor's release of a new version of its model prior to using it in GSD's proposed sensitives approach calculation. In the event that the vendor changes its model and methodologies that produce the risk factors and risk sensitivities, FICC would analyze the effect of the proposed changes on GSD's proposed sensitivity approach. Future changes to the QRM Methodology would be subject to a proposed rule change pursuant to Rule 19b-4 ("Rule 19b-4")<sup>27</sup> of the Act and may be subject to an advance notice filing pursuant to Section 806(e)(1) of the Clearing Supervision Act<sup>28</sup> and Rule

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exposure analytics. FICC would use the following risk factors to model a TBA security: key rates, convexity, mortgage-backed securities spread, volatility, mortgage basis, and time. To account for differences between mortgage-backed securities and their corresponding TBA, FICC would apply an additional basis risk adjustment.

<sup>27</sup> See 17 CFR 240.19b-4.

<sup>28</sup> See 12 U.S.C. 5465(e)(1).

19b-4(n)(1)(I) under the Act.<sup>29</sup> Modifications to the proposed VaR Charge may be subject to a proposed rule change pursuant to Rule 19b-4<sup>30</sup> and/or an advance notice filing pursuant to Section 806(e)(1) of the Clearing Supervision Act<sup>31</sup> and Rule 19b-4(n)(1)(I) under the Act.<sup>32</sup>

Under the proposed approach, a Netting Member's portfolio risk sensitivities would be calculated by FICC as the aggregate of the security level risk sensitivities weighted by the corresponding position market values. More specifically, FICC would look at the historical changes of the chosen risk factors during the look-back period in order to generate risk scenarios to arrive at the market value changes for a given portfolio. A statistical probability distribution would be formed from the portfolio's market value changes, which are then calibrated to cover the projected liquidation losses at a 99% confidence level. The portfolio risk sensitivities and the historical risk factor time series data would then be used by FICC's risk model to calculate the VaR Charge for each Netting Member.

The proposed sensitivity approach differs from the current full revaluation approach mainly in how the market value changes are calculated. The full revaluation approach accounts for changes in market variables and instrument specific characteristics of U.S. Treasury/Agency securities and mortgage-backed securities by

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<sup>29</sup> See 17 CFR 240.19b-4(n)(1)(I).

<sup>30</sup> See 17 CFR 240.19b-4.

<sup>31</sup> See 12 U.S.C. 5465(e)(1).

<sup>32</sup> See 17 CFR 240.19b-4(n)(1)(I).

incorporating certain historical data to calibrate a pricing model that generates simulated prices. This data is used to create a distribution of returns per each security. By comparison, the proposed sensitivity approach would simulate the market value changes of a Netting Member's portfolio under a given market scenario as the sum of the portfolio risk factor exposures multiplied by the corresponding risk factor movements.

FICC believes that the sensitivity approach would provide three key benefits. First, the sensitivity approach incorporates a broad range of structured risk factors and a Netting Member portfolios' exposure to these risk factors, while the full revaluation approach is calibrated with only security level historical data that is supplemented by the augmented volatility adjustment multiplier. The proposed sensitivity approach integrates both observed risk factor changes and current market conditions to more effectively respond to current market price moves that may not be reflected in the historical price moves combined with the augmented volatility adjustment multiplier. In this regard, FICC has concluded, based on its assessment of the backtesting results of the proposed sensitivity approach and its comparison of those results to the backtesting results of the current full revaluation approach<sup>33</sup> that the proposed sensitivity approach would address the deficiencies observed in the existing model because it would leverage external vendor expertise, which FICC does not need to develop in-house, in supplying

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<sup>33</sup> The backtesting results compared the aggregate CFR under the current methodology and the aggregate CFR under the proposed methodology to historical returns of end-of-day snapshots of each Netting Member's portfolio for the period May 2016 through October 2017. The CFR backtesting results under the proposed methodology were calculated in two ways for end-of-day portfolios: one set of results included the proposed Blackout Period Exposure Adjustment and the other set of results excluded the proposed Blackout Period Exposure Adjustment.

the market risk attributes that would then be incorporated by FICC into GSD's model to calculate the VaR Charge. With respect to FICC's review of the backtesting results, FICC believes that the calculation of the VaR Charge using the proposed sensitivity approach would provide better coverage on volatile days while not significantly increasing the overall Clearing Fund.<sup>34</sup> In fact, the calculation of the VaR Charge using the proposed sensitivity approach would produce a VaR Charge amount that is consistent with the current VaR Charge calculation, as supplemented by Margin Proxy.<sup>35</sup>

The second benefit of the proposed sensitivity approach is that it would provide more transparency to Netting Members. Because Netting Members typically use risk factor analysis for their own risk and financial reporting, such Members would have comparable data and analysis to assess the variation in their VaR Charge based on changes in the market value of their portfolios. Thus, Netting Members would be able to simulate the VaR Charge to a closer degree than under the existing full revaluation approach.

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<sup>34</sup> The CFR backtesting results under the proposed methodology (both with and without Blackout Period Exposure Adjustment) indicate that the proposed methodology provided better overall coverage during the volatile period following the U.S. election than under the current methodology. The CFR Backtesting results under the proposed methodology were also more stable over the May 2016 through October 2017 study period than the CFR backtesting results under the existing methodology.

<sup>35</sup> FICC implemented the Margin Proxy at the end of April 2017. As a result, the CFR backtesting coverage under the current methodology increased in May 2017 and were more consistent with the CFR backtesting results under the proposed methodology from May 2017 through October 2017. Based on data reflected in the impact study, FICC observes that for the period May 1, 2017 to November 30, 2017 an approximate 7% increase in average aggregate AM RFD across all Netting Members.

The third benefit of the proposed sensitivity approach is that it would provide FICC with the ability to adjust the look-back period that FICC uses for purposes of calculating the VaR Charge. Specifically, FICC would change the look-back period from a front-weighted<sup>36</sup> 1-year look-back (which is currently utilized today) to a 10-year look-back period that is not front-weighted and would include, to the extent applicable, an additional stressed period.<sup>37</sup> The proposed extended look-back period would help to ensure that the historical simulation contains a sufficient number of historical market conditions (including but not limited to stressed market conditions).

While FICC could extend the 1-year look-back period in the existing full revaluation approach to a 10-year look-back period, the performance of the existing model could deteriorate if current market conditions are materially different than indicated in the historical data. Additionally, since the full revaluation approach requires FICC to maintain in-house complex pricing models and mortgage prepayment models, enhancing these models to extend the look-back period to include 10 years of historical data involves significant model development. The sensitivity approach, on the

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<sup>36</sup> A front-weighted look-back period assigns more weight to the most recent market observations thus effectively diminishing the value of older market observations. The front-weighted approach is based on the assumption that the most recent price history is more relevant to current market volatility levels.

<sup>37</sup> Under the proposed model, the 10-year look-back period would include the 2008/2009 financial crisis scenario. To the extent that an equally or more stressed market period does not occur when the 2008/2009 financial crisis period is phased out from the 10-year look-back period (i.e., from September 2018 onward), pursuant to the QRM methodology document, FICC would continue to include the 2008/2009 financial crisis scenario in its historical scenarios. However, if an equally or more stressed market period emerges in the future, FICC may choose not to augment its 10-year historical scenarios with those from the 2008/2009 financial crisis.

other hand, would leverage external vendor data to incorporate a longer look-back period of 10 years, which would allow the proposed model to capture periods of historical volatility.

In the event FICC observes that the 10-year look-back period does not contain a sufficient number of stressed market conditions, FICC would have the ability to include an additional period of historically observed stressed market conditions to a 10-year look-back period or adjust the length of look-back period. The additional stress period is designed to be a continuous period (typically 1 year). FICC believes that it is appropriate to assess on an annual basis whether an additional stressed period should be included. This assessment, which will only occur annually, would include a review of (1) the largest moves in the dominating market risk factor of the proposed sensitivity approach, (2) the impact analyses resulting from the removal and/or addition of a stressed period, and (3) the backtesting results of the proposed look-back period. As described in the QRM Methodology, approval by DTCC's Model Risk Governance Committee ("MRGC") and, to the extent necessary, the Management Risk Committee ("MRC") would be required to determine when to apply an additional period of stressed market conditions to the look-back period and the appropriate historical stressed period to utilize if it is not within the current 10-year period.

**2. Proposed change to amend the VaR Charge to eliminate the augmented volatility adjustment multiplier**

As described above, the augmented volatility adjustment multiplier gives GSD the ability to adjust its volatility calculations as needed to improve the performance of its VaR the model in periods of market volatility. The augmented volatility adjustment multiplier was designed to mitigate the effect of the 1-year look-back period used in the

existing full revaluation approach because it allowed the model to better react to conditions that may not have been within the recent historical one-year period. FICC is proposing to eliminate the augmented volatility adjustment multiplier because it would be no longer necessary given that the proposed sensitivity approach would have a longer look-back period and the ability to include an additional stressed market condition to account for periods of market volatility.

**3. Proposed change to implement the Margin Proxy as the VaR Charge during a vendor data disruption**

*a. Vendor Data Disruption*

In connection with FICC's proposal to source data for the proposed sensitivity approach, FICC is also proposing procedures that would govern in the event that the vendor fails to provide risk analytics data. If the vendor fails to provide any data or a significant portion of the data timely, FICC would use the most recently available data on the first day that such data disruption occurs. If it is determined that the vendor will resume providing data within five (5) business days, FICC's management would determine whether the VaR Charge should continue to be calculated by using the most recently available data along with an extended look-back period or whether the Margin Proxy should be invoked, subject to the approval of DTCC's Group Chief Risk Officer or his/her designee. If it is determined that the data disruption will extend beyond five (5) business days, the Margin Proxy would be applied as an alternative volatility calculation for the VaR Charge subject to the proposed VaR Floor.<sup>38</sup> FICC's proposed

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<sup>38</sup> The proposed VaR Floor is defined below in subsection B.5 – *Proposed change to amend the VaR Charge calculation to establish a VaR Floor.*

use of the Margin Proxy would be subject to the approval of the MRC followed by notification to FICC's Board Risk Committee. FICC would continue to calculate the Margin Proxy on a daily basis and this calculation would continue to reflect separate calculations for U.S. Treasury/Agency securities and mortgage-backed securities.<sup>39</sup> The Margin Proxy would be subject to monthly performance review by the MRGC. FICC would monitor the performance of the Margin Proxy calculation on a monthly basis to ensure that it could be used in the circumstance described above. Specifically, FICC would monitor each Netting Member's Required Fund Deposit and the aggregate Clearing Fund requirements versus the requirements calculated by Margin Proxy. FICC would also backtest the Margin Proxy results versus the three-day profit and loss based on actual market price moves. If FICC observes material differences between the Margin Proxy calculations and the aggregate Clearing Fund requirement calculated using the proposed sensitivity approach, or if the Margin Proxy's backtesting results do

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<sup>39</sup> Currently, GSD conducts separate calculations in order to cover the historical market prices of U.S. Treasury/Agency securities and mortgage-backed securities, respectively, because the historical price changes of these asset classes are different as a result of market factors such as credit spreads and prepayment risk. Separate calculations also provide FICC with the ability to monitor the performance of each asset class individually. Each security in a Netting Member's Margin Portfolio is mapped to a separate benchmark based on the security's asset class and maturity. All securities within each benchmark are then aggregated into a net exposure. FICC then applies an applicable haircut to the net exposure per benchmark to determine the net price risk for each benchmark. Finally, FICC determines the asset class price risk ("Asset Class Price Risk") for U.S. Treasury/Agency securities and mortgage-backed securities benchmarks separately by aggregating the respective net price risk. For the U.S. Treasury benchmarks, the calculation includes a correlation adjustment to provide risk diversification across tenor buckets that has been historically observed across the U.S. Treasury benchmarks. The Margin Proxy is the sum of the U.S. Treasury/Agency securities and mortgage-backed securities Asset Class Price Risk. No changes are being proposed to this calculation.

not meet FICC's 99% confidence level, FICC management may recommend remedial actions to the MRGC, and to the extent necessary the MRC, such as increasing the look-back period and/or applying an appropriate historical stressed period to the Margin Proxy calibration.

As noted above, FICC intends to source certain sensitivity data and risk factor data from a vendor. FICC's Quantitative Risk Management, Vendor Risk Management, and Information Technology teams have conducted due diligence of the vendor in order to evaluate its control framework for managing key risks. FICC's due diligence included an assessment of the vendor's technology risk, business continuity, regulatory compliance, and privacy controls. FICC has existing policies and procedures for data management that includes market data and analytical data provided by vendors. These policies and procedures do not have to be amended in connection with this proposed rule change. FICC also has tools in place to assess the quality of the data that it receives from vendors.

b. *Regulation SCI Implications*

Rule 1001(c)(1) of Regulation Systems Compliance and Integrity ("SCI") requires FICC to establish, maintain, and enforce reasonably designed written policies and procedures that include the criteria for identifying responsible SCI personnel, the designation and documentation of responsible SCI personnel, and escalation procedures to quickly inform responsible SCI personnel of potential SCI events.<sup>40</sup> Further, pursuant to Rule 1002 of Regulation SCI, each responsible SCI personnel determines when there

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<sup>40</sup> See 17 CFR 242.1001(c)(1).

is a reasonable basis to conclude that a SCI event has occurred, which will trigger certain obligations of a SCI entity with respect to such SCI events.<sup>41</sup> FICC has existing policies and procedures that reflect established criteria that must be used by responsible SCI personnel to determine whether a disruption to, or significantly downgrade of, the normal operation of FICC's risk management system has occurred as defined under Regulation SCI. These policies and procedures do not have to be amended in connection with this proposed rule change. In the event that the vendor fails to provide the requisite risk analytics data, the responsible SCI personnel would determine whether a SCI event has occurred, and FICC would fulfill its obligations with respect to the SCI event.

**4. Proposed change to utilize a haircut method to measure the risk exposure of securities that lack historical data**

Occasionally, portfolios contain classes of securities that reflect market price changes that are not consistently related to historical risk factors. The value of these securities is often uncertain because the securities' market volume varies widely, thus the price histories are limited. Because the volume and price information for such securities is not robust, a historical simulation approach would not generate VaR Charge amounts that adequately reflect the risk profile of such securities. Currently, GSD Rule 4 provides that FICC may use a historic index volatility model to calculate the VaR Charge for these classes of securities.<sup>42</sup> FICC is proposing to amend GSD Rule 4 to

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<sup>41</sup> See 17 CFR 242.1002.

<sup>42</sup> See GSD Rule 4, supra note 4.

utilize a haircut method based on a historic index volatility model for any security that lack sufficient historical data to be incorporated into the proposed sensitivity approach.

FICC believes that the proposal to implement a haircut method for securities that lack sufficient historical information would allow FICC to use appropriate market data to estimate a margin at a 99% confident level, thus helping to ensure that sufficient margin would be calculated for portfolios that contain these securities. FICC would continue to manage the market risk of clearing these securities by conducting analysis on the type of securities that cannot be processed by the proposed VaR model and engaging in periodic reviews of the haircuts used for calculating margin for these types of securities.

FICC is proposing to calculate the VaR Charge for these securities by utilizing a haircut approach based on a market benchmark with a similar risk profile as the related security. The proposed haircut approach would be calculated separately for U.S. Treasury/Agency securities (other than (x) treasury floating-rate notes and (y) term repo rate volatility for Term Repo Transactions and Forward-Starting Repo Transactions (including term and forward-starting GCF Repo Transactions))<sup>43</sup> and mortgage-backed securities.

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<sup>43</sup> GSD is not proposing any changes to its current approach to calculating the VaR Charge for floating rate notes. Currently, GSD uses a haircut approach with a constant discount margin movement scenario. The discount margin movement scenario is based on the current market condition of the floating rate note price movements. This amount plus the calculated discount margin sensitivity of each floating rate note issue's market price plus the formula provided by the U.S. Department of Treasury equals the haircut of the floating rate note portion of a Netting Member's portfolio. GSD is also not proposing any change to its current approach to calculating the VaR Charge for repo interest volatility, which is based on internally constructed repo interest rate indices.

Specifically, each security in a Netting Member's portfolio would be mapped to a respective benchmark based on the security's asset class and remaining maturity, then all securities within each benchmark would be aggregated into a net exposure. FICC would apply an applicable haircut to the net exposure per benchmark to determine the net price risk for each benchmark. Finally, the net price risk would be aggregated across all benchmarks (but separately for U.S. Treasury/Agency securities and mortgage-backed securities) and a correlation adjustment<sup>44</sup> would be applied to securities mapped to the U.S. Treasury benchmarks to provide risk diversification across tenor buckets that were historically observed.

**5. Proposed change to amend the VaR Charge calculation to establish a VaR Floor**

FICC is proposing to amend the existing calculation of the VaR Charge to include a minimum amount, which would be referred to as the "VaR Floor." The proposed VaR Floor would be a calculated amount that would be used as the VaR Charge when the sum of the amounts calculated by the proposed sensitivity approach and haircut method is less than the proposed VaR Floor. FICC's proposal to establish a VaR Floor seeks to address the risk that the proposed VaR model calculates a VaR Charge that is erroneously low where the gross market value of unsettled positions in the Netting Member's portfolio is high and the cost of liquidation in the event of a Member default could also be high. This would be likely to occur when the proposed VaR model

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<sup>44</sup> The correlation adjustment is based on 3-day returns during a 10-year look-back. It reflects the average amount that the 3-day returns of each benchmark moves in relation to one another. The correlation adjustment would only be applied for U.S. Treasury and Agency indices with maturities greater than 1 year.

applies substantial risk offsets among long and short positions in different classes of securities that have a high degree of historical price correlation. Because this high degree of historical price correlation may not apply in future changing market conditions,<sup>45</sup> FICC believes that it would be prudent to apply a VaR Floor that is based upon the market value of the gross unsettled positions in the Netting Member's portfolio in order to protect FICC against such risk in the event that FICC is required to liquidate a large Netting Member's portfolio in stressed market conditions.

The VaR Floor would be calculated as the sum of the following two components: (1) a U.S. Treasury/Agency bond margin floor and (2) a mortgage-backed securities margin floor. The U.S. Treasury/Agency bond margin floor would be calculated by mapping each U.S. Treasury/Agency security to a tenor bucket, then multiplying the gross positions of each tenor bucket by its bond floor rate, and summing the results. The bond floor rate of each tenor bucket would be a fraction (which would be initially set at 10%) of an index-based haircut rate for such tenor bucket. The mortgage-backed securities margin floor would be calculated by multiplying the gross market value of the total value of mortgage-backed securities in a Netting Member's portfolio by a designated amount, referred to as the pool floor rate, (which would be initially set at 0.05%).<sup>46</sup> GSD would evaluate the appropriateness of the proposed initial floor rates

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<sup>45</sup> For example, and without limitation, certain securities may have highly correlated historical price returns, but if future market conditions were to substantially change, these historical correlations could break down, leading to model-generated offsets that would not adequately capture a portfolio's risk.

<sup>46</sup> For example, assume the pool floor rate is set to 0.05% and the bond floor rate is set to 10% of haircut rates. Further assume that a Netting Member has a portfolio with gross positions of \$2 billion in mortgage-backed securities and

(e.g., the 10% of the benchmark haircut rate for U.S. Treasury/Agency securities and 0.05% for mortgage-backed securities) at least annually based on backtesting performance and risk tolerance considerations.

## **6. Mitigating Risks of Concentrated Positions**

For the reasons described above, FICC believes that the proposed changes to GSD's VaR Charge calculation would allow it to better measure and mitigate the risks presented by certain unsettled positions, including the risk presented to FICC when those positions are concentrated in a particular security.

One of the risks presented by unsettled positions concentrated in an asset class is that FICC may not be able to liquidate or hedge the unsettled positions of a defaulted Netting Member in the assumed timeframe at the market price in the event of such Netting Member's default. Because FICC relies on external market data in connection with monitoring exposures to its Members, the market data may not reflect the market impact transaction costs associated with the potential liquidation as the concentration risk of an unsettled position increases. However, FICC believes that, through the proposed changes and through existing risk management measures,<sup>47</sup> it would be able to

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gross positions of U.S. Treasury/Agency securities that fall into two tenor buckets – \$2 billion in tenor bucket “A” and \$3 billion in tenor bucket “B.” If the haircut rate for tenor bucket “A” is 1% and the haircut rate for tenor bucket “B” is 2%, then the bond floor rate would be 0.1% and 0.2%, respectively. Therefore, the resulting VaR Floor would be \$9 million (i.e.,  $([0.05\%]*[\$2 \text{ billion}]) + [0.1\%]*[\$2 \text{ billion}] + ([0.2\%]*[\$3 \text{ billion}])$ ). If the VaR model charge is less than \$9 million, then the VaR Floor calculation of \$9 million would be set as the VaR Charge.

<sup>47</sup> For example, pursuant to existing authority under GSD Rule 4, FICC has the discretion to calculate an additional amount (“special charge”) applicable to a Margin Portfolio as determined by FICC from time to time in view of market

effectively measure and mitigate risks presented when a Netting Member's unsettled positions are concentrated in a particular security.

FICC will continue to evaluate its exposures to these risks. Any future proposed changes to the margin methodology to address such risks would be subject to a separate proposed rule change pursuant Rule 19b-4 of the Act,<sup>48</sup> and/or an advance notice pursuant to Section 806(e)(1) of the Clearing Supervision Act<sup>49</sup> and the rules thereunder.

**C. Proposed change to establish the Blackout Period Exposure Adjustment as a component to the Required Fund Deposit calculation**

FICC is proposing to add a new component to the Required Fund Deposit calculation that would be applied to the VaR Charge for all GCF Counterparties with GCF Repo Transactions collateralized with mortgage-backed securities during the monthly Blackout Period (the "Blackout Period Exposure Adjustment"). FICC is proposing this new component because it would better protect FICC and its Netting Members from losses that could result from overstated values of mortgage-backed securities pledged as collateral for GCF Repo Transactions during the Blackout Period.

The proposed Blackout Period Exposure Adjustment would be in the form of a charge that is added to the VaR Charge or a credit that would reduce the VaR Charge.

The proposed Blackout Period Exposure Adjustment would be calculated by

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conditions and other financial and operational capabilities of the Netting Member. FICC shall make any such determination based on such factors as FICC determines to be appropriate from time to time. See GSD Rule 4, supra note 4.

<sup>48</sup> See 17 CFR 240.19b-4.

<sup>49</sup> See 12 U.S.C. 5465(e)(1).

(1) projecting an average pay-down rate for the government sponsored enterprises (Fannie Mae and Freddie Mac) and the Government National Mortgage Association (Ginnie Mae), respectively, then (2) multiplying the projected pay-down rate<sup>50</sup> by the net positions of mortgage-backed securities in the related program, and (3) summing the results from each program. Because the projected pay-down rate would be an average of the weighted averages of pay-down rates for all active mortgage pools of the related program during the three most recent preceding months, it is possible that the proposed Blackout Period Exposure Adjustment could overestimate the amount for a GCF Counterparty with a portfolio that primarily includes slower paying mortgage-backed securities or underestimate the amount for a GCF Counterparty with a portfolio that primarily includes faster paying mortgage-backed securities. However, FICC believes that projecting the pay-down rate separately for each program and weighting the results by recently active pools would reduce instances of large under/over estimation. FICC would continue to monitor the realized pay-down against FICC's weighted average pay-down rates and its vendor's projected pay-down rates as part of the model performance monitoring. Further, in the event that a GCF Counterparty continues to experience backtesting deficiencies, FICC would apply a Backtesting Charge, which as described in section F below, would be amended to consider backtesting deficiencies attributable to

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<sup>50</sup> GSD would calculate the projected average pay-down rates each month using historical pool factor pay-down rates that are weighted by historical positions during each of the prior three months. Specifically, the projected pay-down rate for a current Blackout Period would be an average of the weighted averages of pay-down rates for all active mortgage pools of the related program during the three most recent preceding months.

GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.<sup>51</sup>

The proposed Blackout Period Exposure Adjustment would only be imposed during the Blackout Period and it would be applied as of the morning Clearing Fund call on the Record Date through and including the intraday Clearing Fund call on the Factor Date, or until the Pool Factors<sup>52</sup> have been updated to reflect the current month's Pool Factors in the GCF Clearing Agent Bank's collateral reports.

**D. Proposed change to eliminate the existing Blackout Period Exposure Charge**

FICC would eliminate the existing Blackout Period Exposure Charge<sup>53</sup> because the proposed Blackout Period Exposure Adjustment (which is described in section C above) would be applied to *all* GCF Counterparties with GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period. The existing

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<sup>51</sup> The proposed changes to the Backtesting Charge are described below in section F – *Proposed change to amend the Backtesting Charge to (i) include backtesting deficiencies attributed to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period and (ii) give GSD the authority to assess a Backtesting Charge on an intraday basis.*

<sup>52</sup> Pursuant to the GSD Rules, the term “Pool Factor” means, with respect to the Blackout Period, the percentage of the initial principal that remains outstanding on the mortgage loan pool underlying a mortgage-backed security, as published by the government-sponsored entity that is the issuer of such security. See GSD Rule 1, supra note 4.

<sup>53</sup> Pursuant to the GSD Rules, FICC imposes a Blackout Period Exposure Charge when FICC determines, based on prior backtesting deficiencies of a GCF Counterparty's Required Fund Deposit, that the GCF Counterparty may experience a deficiency due to reductions in the notional value of the mortgage-backed securities used by such GCF Counterparty to collateralize its GCF Repo trading activity that occur during the monthly Blackout Period. See GSD Rules 1 and 4, supra note 4.

Blackout Period Exposure Charge, on the other hand, *only* applies to GCF Counterparties that have two or more backtesting deficiencies during the Blackout Period and whose overall 12-month trailing backtesting coverage falls below the 99% coverage target.<sup>54</sup> FICC believes that the Blackout Period Exposure Charge would no longer be necessary because the applicability of the proposed Blackout Period Exposure Adjustment would better estimate potential changes to the GCF Repo Transactions and help to ensure that GCF Counterparties' with GCF Repo Transactions collateralized with mortgage-backed securities maintain a backtesting coverage above the 99% confidence level. Further, in the event that a GCF Counterparty continues to experience backtesting deficiencies, FICC would apply a Backtesting Charge, which as described in section F below, would be amended to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.<sup>55</sup>

**E. Proposed change to eliminate the Coverage Charge component from the Required Fund Deposit calculation**

FICC is proposing to eliminate the Coverage Charge component from GSD's Required Fund Deposit calculation.<sup>56</sup> The Coverage Charge component is based on historical portfolio activity, which may not be indicative of a Netting Member's current

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<sup>54</sup> See GSD Rules 1 and 4, supra note 4.

<sup>55</sup> The proposed changes to the Backtesting Charge are described below in section F – *Proposed change to amend the Backtesting Charge to (i) include backtesting deficiencies attributed to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period and (ii) give GSD the authority to assess a Backtesting Charge on an intraday basis.*

<sup>56</sup> See GSD Rules 1 and 4, supra note 4.

risk profile, but was determined by FICC to be appropriate to address potential shortfalls in margin charges under the current VaR model. FICC is proposing to eliminate the Coverage Component because its analysis indicates that the sensitivity approach would provide overall better margin coverage.

As part of the development and assessment of the proposed VaR Charge, FICC backtested the model's performance and analyzed the impact of the margin changes. Results of the analysis indicated that the proposed sensitivity approach would be more responsive to changing market dynamics and a Netting Member's portfolio composition coverage than the existing VaR model that utilizes the full revaluation approach. The backtesting analysis also demonstrated that the proposed sensitivity approach would provide sufficient margin coverage on a standalone basis. Additionally, in the event that FICC observes unexpected deficiencies in the backtesting of a Netting Member's Required Fund Deposit, the Backtesting Charge would apply.<sup>57</sup> Given the above, FICC believes the Coverage Charge would no longer be necessary.

**F. Proposed change to amend the Backtesting Charge to (i) include backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period and (ii) give GSD the authority to assess a Backtesting Charge on an intraday basis**

FICC is proposing to amend the Backtesting Charge to (i) include backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed

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<sup>57</sup> Similar to the Coverage Charge, the purpose of the Backtesting Charge is to address potential shortfalls in margin charges, however, the Coverage Charge considers the backtesting results of only the VaR Charge (including the augmented volatility adjustment multiplier) and mark-to-market.

securities during the Blackout Period and (ii) give GSD the authority to assess a Backtesting Charge on an intraday basis.

- (i) *Proposed change to amend the Backtesting Charge to include backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period*

FICC is proposing to amend the Backtesting Charge to provide that this charge would be applied to a GCF Counterparty that experiences backtesting deficiencies that are attributed to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period. Currently, Backtesting Charges are not applied to GCF Counterparties with collateralized mortgage-backed securities during the Blackout Period because such counterparties may be subject to a Blackout Period Exposure Charge. However, now that FICC is proposing to eliminate the Blackout Period Exposure Charge, FICC is proposing to amend the applicability of the Backtesting Charge in the circumstances described above.

- (ii) *Proposed change to give GSD the authority to assess a Backtesting Charge on an intraday basis*

FICC is also proposing to amend the Backtesting Charge to provide that this charge may be assessed if a Netting Member is experiencing backtesting deficiencies during the trading day (i.e., intraday) because of such Netting Member's large fluctuations of intraday trading activities. A Backtesting Charge that is imposed intraday would be referred to as a "Intraday Backtesting Charge." The Intraday Backtesting Charge would be assessed on an intraday basis and it would increase a Netting Member's Required Fund Deposit to help ensure that its intraday backtesting coverage achieves the 99% confidence level.

The proposed assessment of the Intraday Backtesting Charge differs from the existing assessment of the Backtesting Charge because the existing assessment is based on the backtesting results of a Netting Member's PM RFD versus the historical returns of such Netting Member's portfolio at the end of the trading day while the proposed Intraday Backtesting Charge would be based on the most recent Required Fund Deposit amount that was collected from a Netting Member versus the historical returns of such Netting Member's portfolio intraday.

In an effort to differentiate the proposed Intraday Backtesting Charge from the existing Backtesting Charge, FICC is proposing to change the name of the existing Backtesting Charge to "Regular Backtesting Charge." The Intraday Backtesting Charge and the Regular Backtesting Charge would collectively be referred to as the Backtesting Charge.

*Calculation and assessment of Intraday Backtesting Charges*

FICC would use a snapshot of each Netting Member's portfolio during the trading day,<sup>58</sup> and compare each Netting Member's AM RFD with the simulated liquidation gains/losses using an intraday snapshot of the actual positions in the Netting Member's portfolio, and the actual historical security returns. FICC would review portfolios with intraday backtesting deficiencies that bring the results for that Netting

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<sup>58</sup> The snapshot would occur once a day. The timing of the snapshot would be subject to change based upon market conditions and/or settlement activity. This snapshot would be taken at the same time for all Netting Members. All positions that have settled would be excluded. FICC would take additional intraday snapshots and/or change the time of the intraday snapshot based upon market conditions. FICC would include the positions from the start-of-day plus any additional positions up to that time.

Member below the 99% confidence level (i.e., greater than two intraday backtesting deficiency days in a rolling twelve-month period) and determine whether there is an identifiable cause of ongoing repeat backtesting deficiencies. FICC would also evaluate whether multiple Netting Members are experiencing backtesting deficiencies due to similar underlying reasons.

As is the case with the existing Backtesting Charge (which would be referred to as the “Regular Backtesting Charge”), the proposed Intraday Backtesting Charge would be assessed on Netting Members with portfolios that experience at least three intraday backtesting deficiencies over the prior 12-month period. The proposed Intraday Backtesting Charge would generally equal a Netting Member’s third largest historical intraday backtesting deficiency because FICC believes that an Intraday Backtesting Charge equal to the third largest historical intraday backtesting deficiency would bring the affected Netting Member’s historically observed intraday backtesting coverage above the 99% confidence level.

FICC would have the discretion to adjust the Intraday Backtesting Charge to an amount that is more appropriate for maintaining such Netting Member’s intraday backtesting results above the 99% coverage threshold.<sup>59</sup>

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<sup>59</sup> For example, FICC may consider whether the affected Netting Member would be likely to experience future intraday backtesting deficiencies, the estimated size of such deficiencies, material differences in the three largest intraday backtesting deficiencies observed over the prior 12-month period, variabilities in its net settlement activity subsequent to GSD’s collection of the AM RFD, seasonality in observed intraday backtesting deficiencies and observed market price volatility in excess of its historical VaR Charge.

In the event that FICC determines that an Intraday Backtesting Charge should apply in the circumstances described above, FICC would notify the affected Netting Member prior to its assessment of the charge. As is the case with the existing application of the Backtesting Charge, FICC would notify Netting Members on or around the 25th calendar day of the month.

The proposed Intraday Backtesting Charge would be applied to the affected Netting Member's Required Fund Deposit on a daily basis for a one-month period. FICC would review the assessed Intraday Backtesting Charge on a monthly basis to determine if the charge is still applicable and that the amount charged continues to provide appropriate coverage. In the event that an affected Netting Member's trailing 12-month intraday backtesting coverage exceeds 99% (without taking into account historically imposed Intraday Backtesting Charges), the Intraday Backtesting Charge would be removed.

**G. Proposed change to the Excess Capital Premium calculation for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members**

FICC is proposing to move to a net capital measure for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members that would align the Excess Capital Premium for such Members to a measure that is consistent with the equity capital measure that is used for Bank Netting Members in the Excess Capital Premium calculation.

Currently, the Excess Capital Premium is determined based on the amount that a Netting Member's Required Fund Deposit exceeds its Excess Capital.<sup>60</sup> Only Netting Members that are brokers or dealers registered under Section 15 of the Act are required to report Excess Net Capital figures to FICC while other Netting Members report net capital or equity capital. If a Netting Member is not a broker/dealer, FICC would use net capital or equity capital, as applicable (based on the type of regulation that such Netting Member is subject to) in order to calculate its Excess Capital Premium.

FICC is proposing this change because of the Commission's amendments to Rule 15c3-1 (the "Net Capital Rule"), which were adopted in 2013.<sup>61</sup> The amendments are designed to promote a broker/dealer's capital quality and require the maintenance of "net capital" (i.e., capital in excess of liabilities) in specified amounts as determined by the type of business conducted. The Net Capital Rule is designed to ensure the availability of funds and assets (including securities) in the event that a broker/dealer's liquidation becomes necessary. The Net Capital Rule represents a net worth perspective, which is adjusted by unrealized profit or loss, deferred tax provisions, and certain liabilities as detailed in the rule. It also includes deductions and offsets, and requires that a broker/dealer demonstrate compliance with the Net Capital Rule including maintaining sufficient net capital at all times (including intraday).

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<sup>60</sup> Pursuant to the GSD Rules, the term "Excess Capital" means Excess Net Capital, net assets or equity capital as applicable, to a Netting Member based on its type of regulation. See GSD Rule 1, supra note 4.

<sup>61</sup> See 17 CFR 240.15c3-1. Securities Exchange Act Release No. 34-70072 (July 30, 2013), 78 FR 51823 (August 21, 2013) (File No. S7-08-07).

FICC believes that the Net Capital Rule is an effective process of separating liquid and illiquid assets, and computing a broker/dealer's regulatory net capital that should replace GSD's existing practice of using Excess Net Capital (which is the difference between the Net Capital and the minimum regulatory Net Capital) as the basis for the Excess Capital Premium.

#### **H. GSD's existing calculation and assessment of Intraday Supplemental Fund Deposit amounts**

Separate and apart from the AM RFD and the PM RFD, the GSD Rules give FICC the existing authority to collect Intraday Supplemental Fund Deposits from Netting Members.<sup>62</sup> Through this filing, FICC is providing transparency with respect to GSD's existing calculation of Intraday Supplemental Fund Deposit amounts.

Pursuant to the GSD Rules, the Intraday Supplemental Fund Deposits is determined based on GSD's observations of a Netting Member's simulated VaR Charge as it is re-calculated throughout the trading day based on the open positions of such Member's portfolio at designated times (the "Intraday VaR Charge").<sup>63</sup> FICC is proposing to provide transparency with respect to its existing authority to calculate and assess the Intraday Supplemental Fund Deposit as described in further detail below.

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<sup>62</sup> As described above in section A. - *The Required Fund Deposit and Clearing Fund Calculation Overview*, GSD calculates and collects each Netting Member's Required Fund Deposit twice each business day. The AM RFD is collected at 9:30 a.m. (E.T.) and is comprised of a VaR Charge that is based on each Netting Member's portfolio at the end of the trading day. The PM RFD is collected at 2:45 p.m. and is comprised of a VaR Charge that is based on a snapshot of each Netting Member's portfolio collected at noon and, if applicable, an Intraday Supplemental Fund Deposit collected after noon.

<sup>63</sup> See Rule 4 Section 2a, supra note 4.

The Intraday Supplemental Fund Deposit is designed to mitigate exposure to GSD that results from large fluctuations in a Netting Member's portfolio due to new and settled trade activities that are not otherwise covered by a Netting Member's recently collected Required Fund Deposit. FICC determines whether to assess an Intraday Supplemental Fund Deposit by tracking three criteria (each, a "Parameter Break") for each Netting Member. The first Parameter Break evaluates whether a Netting Member's Intraday VaR Charge equals or exceeds a set dollar amount (as determined by FICC from time to time) when compared to the VaR Charge that was included in the most recently collected Required Fund Deposit including, any subsequently collected Intraday Supplemental Fund Deposit (the "Dollar Threshold"). The second Parameter Break evaluates whether the Intraday VaR Charge equals or exceeds a percentage increase (as determined by FICC from time to time) of the VaR Charge that was included in the most recently collected Required Fund Deposit including, if applicable, any subsequently collected Intraday Supplemental Fund Deposit (the "Percentage Threshold"). The third Parameter Break evaluates whether a Netting Member is experiencing backtesting results below the 99% confidence level (the "Coverage Target").

*a) The Dollar Threshold*

The purpose of the Dollar Threshold is to identify Netting Members with additional risk exposures that represent a substantial portion of the Clearing Fund. FICC believes these Netting Members pose an increased risk of loss to GSD because the coverage provided by the Clearing Fund (which is designed to cover the aggregate losses of all Netting Members' portfolios) would be substantially impacted by large exposures. In other words, in the event that a Netting Member's Required Fund Deposit

is not sufficient to satisfy losses to GSD caused by the liquidation of the defaulted Netting Member's portfolio, FICC will use the Clearing Fund to satisfy such losses. However, because the Clearing Fund must be available to satisfy potential losses that may arise from any Netting Member's defaults, GSD will be exposed to a significant risk of loss if a defaulted Netting Member's additional risk exposure accounted for a substantial portion of the Clearing Fund.

The Dollar Threshold is set to an amount that would help to ensure that the aggregate additional risk exposure of all Netting Members does not exceed 5% of the Clearing Fund. FICC believes that the availability of at least 95% of the Clearing Fund to satisfy all other liquidation losses caused by a defaulted Netting Member is sufficient to mitigate risks posed to FICC by such losses.

Currently, the Dollar Threshold equals a change in a Netting Member's Intraday VaR Charge that equals or exceeds \$1,000,000 when compared to the VaR Charge that was included in the most recently collected Required Fund Deposit including, if applicable, any subsequently collected Intraday Supplemental Fund Deposit. On an annual basis, FICC assesses the sufficiency of the Dollar Threshold, and may adjust the Dollar Threshold if FICC determines that an adjustment is necessary to provide GSD with reasonable coverage.

*b) The Percentage Threshold*

The purpose of the Percentage Threshold is to identify Netting Members with Intraday VaR Charge amounts that reflect significant changes when such amounts are compared to the VaR Charge that was included as a component in such Netting Member's most recently collected Required Fund Deposit. FICC believes that these

Netting Members pose an increased risk of loss to GSD because the most recently collected VaR Charge (which is designed to cover estimated losses to a portfolio over a three-day liquidation period at least 99% of the time) may not adequately reflect a Netting Member's portfolio with such Netting Member's significant intraday changes in additional risk exposure. Thus, in the event that the Netting Member defaults during the trading day the Netting Member's most recently collected Required Fund Deposit may be insufficient to cover the liquidation of its portfolio within a three-day liquidation period.

Currently, the Percentage Threshold is equal to a Netting Member's Intraday VaR Charge that equals or exceeds 100% of the most recently calculated VaR Charge included in the most recently collected Required Fund Deposit including, if applicable, any subsequently collected Intraday Supplemental Fund Deposit. On an annual basis, FICC assesses the sufficiency of the Percentage Threshold and may adjust the Percentage Threshold if it determines that such adjustment is necessary to provide GSD with reasonable coverage.

*c) The Coverage Target*

The purpose of the Coverage Target is to identify Netting Members with backtesting results<sup>64</sup> below the 99% confidence level (i.e., greater than two deficiency days in a rolling 12-month period) as reported in the most current month. FICC believes that these Netting Members pose an increased risk of loss to FICC because their backtesting deficiencies demonstrate that GSD's risk-based margin model has not

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<sup>64</sup> The referenced backtesting results would only reflect the Backtesting Charge if such charge is collected in the Required Fund Deposit.

performed as expected based on the Netting Member's trading activity. Thus, the most recently collected Required Fund Deposit might be insufficient to cover the liquidation of a Netting Member's portfolio within a three-day liquidation period in the event that such Member defaults during the trading day.

*d) Assessment and Collection of the Intraday Supplemental Fund Deposits*

In the event that FICC determines that a Netting Member's additional risk exposure breaches all three Parameter Breaks, FICC will assess an Intraday Supplemental Fund Deposit. Should FICC determine that certain market conditions exist<sup>65</sup> FICC would impose an Intraday Supplemental Fund Deposit if a Netting Member's Intraday VaR Charge breaches the Dollar Amount threshold and the Percentage Threshold notwithstanding the fact that the Coverage Target has not been breached by such Netting Member.<sup>66</sup> In addition, during such market conditions, the Dollar Threshold and Percentage Threshold may be reduced if FICC determines a Netting Member's portfolios may present relatively greater risks to FICC since the most recently collected Required Fund Deposit. Any such reduction will not cause the Dollar Threshold to be less than \$250,000 and the Percentage Threshold to be less than 5%.

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<sup>65</sup> Examples include but are not limited to (i) sudden swings in an equity index or (ii) movements in the U.S. Treasury yields and mortgage-backed securities spreads that are outside of historically observed market moves.

<sup>66</sup> In certain market condition, a Netting Member's backtesting coverage may not accurately reflect the risks posed by such Netting Member's portfolio. Therefore, FICC imposes the Intraday Supplemental Fund on Netting Members that breach the Dollar Threshold and Percentage Threshold, despite the fact that such Member may not have breached the Coverage Target during certain market conditions.

FICC has the discretion to waive or change<sup>67</sup> Intraday Supplemental Fund Deposit amounts if it determines that a Netting Member's additional risk exposure and/or breach of a Parameter Break does not accurately reflect GSD's exposure to the fluctuations in the Netting Member's portfolio.<sup>68</sup> Given that there are numerous factors that could result in a Netting Member's additional risk exposure and/or breach of a Parameter Break, FICC believes that it is important to maintain such discretion in order to help ensure that the Intraday Supplemental Fund Deposit is imposed only on Netting Members with additional risk exposures that pose a significant level of risk to FICC.

#### **I. Delayed implementation of the proposed rule change**

This proposed rule change would become operative 45 business days after the later date of the Commission's notice of no objection to this Advance Notice and its approval of the related proposed rule change.<sup>69</sup> The delayed implementation is designed to give Netting Members the opportunity to assess the impact that the proposed rule change would have on their Required Fund Deposit.

Prior to the effective date, FICC would add a legend to the GSD Rules to state that the specified changes to the GSD Rules are approved but not yet operative, and to

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<sup>67</sup> FICC will not reduce the Intraday Supplemental Fund Deposit if such reduction will cause the Netting Member's most recently collected Required Fund Deposit to decrease. In addition, FICC will not increase the Intraday VaR Charge to an amount that is two times more than a Netting Member's most recently collected Required Fund Deposit.

<sup>68</sup> For example, a Netting Member's breach of the Coverage Target could be due to a shortened backtesting look-back period and/or large position fluctuations caused by trading errors.

<sup>69</sup> See supra note 3.

provide the date such approved changes would become operative. The legend would also include the file numbers of the approved proposed rule change and Advance Notice Filing and would state that once operative, the legend would automatically be removed from the GSD Rules.

**J. Description of the proposed changes to the text of the GSD Rules**

**1. Proposed changes to GSD Rule 1 (Definitions)**

FICC is proposing to amend the term “Backtesting Charge” to provide that a GCF Counterparty’s backtesting deficiencies attributable to collateralized mortgage-backed securities during the Blackout Period would be considered in FICC’s assessment of the applicability of the charge. FICC is also proposing to amend the definition of the term “Backtesting Charge” to provide that an Intraday Backtesting Charge may be assessed based on the backtesting results of a Netting Member’s intraday portfolio. In order to differentiate the Intraday Backtesting charge from the existing application of the Backtesting Charge, the existing charge would be referred to as the “Regular Backtesting Charge.” As a result of this proposed change, FICC would be permitted to assess an Intraday Backtesting Charge based on a Netting Member’s intraday portfolio and a Regular Backtesting Charge based on a Netting Member’s end of day portfolio. As a result of this proposed change, FICC’s calculation of the Intraday Backtesting Charge and the Regular Backtesting Charge could include deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period.

FICC is proposing to add the new defined term “Blackout Period Exposure Adjustment” to define a new component in the Required Fund Deposit calculation. This

component would apply to all GCF Counterparties with exposure to mortgage-backed securities in their portfolio during the Blackout Period.

FICC is proposing to delete the term “Blackout Period Exposure Charge.” This component would no longer be necessary because the proposed Blackout Period Exposure Adjustment would be applied to all GCF Counterparties with exposure to mortgage-backed securities in their portfolio.

FICC is proposing to delete the term “Coverage Charge” because this component would be eliminated from the Required Fund Deposit calculation.

FICC is proposing to delete the term “Excess Capital” because FICC is proposing to add the new defined term “Netting Member Capital.”

FICC is proposing to amend the definition of the term “Excess Capital Ratio” to reflect the replacement of “Excess Capital” with “Netting Member Capital.”

FICC is proposing to change the term “Intraday Supplemental Clearing Fund Deposit” to “Intraday Supplemental Fund Deposit” because the latter is consistent with the term that is reflected in GSD Rule 4.

FICC is proposing to amend the term “Margin Proxy” to reflect that the Margin Proxy would be used as an alternative volatility calculation.

FICC is proposing to add the new defined term “Netting Member Capital” to reflect the change to the Net Capital for Broker Netting Members’, Inter-Broker Dealer Netting Members’ and Dealer Netting Members’ calculation of the Excess Capital Ratio.

FICC is proposing to amend the definition of the term “VaR Charge” to establish that (1) the Margin Proxy would be utilized as an alternative volatility calculation in the event that the requisite data used to employ the sensitivity approach is unavailable, and

(2) a VaR Floor would be utilized as the VaR Charge in the event that the proposed model based approach yields an amount that is lower than the VaR Floor.

**2. Proposed changes to GSD Rule 4 (Clearing Fund and Loss Allocation)**

*Proposed changes to Rule 4 Section 1b*

FICC is proposing to eliminate the reference to “Coverage Charge” because this component would no longer be included in the Required Fund Deposit calculation.

FICC is proposing to add the “Blackout Period Exposure Adjustment” because this would be a new component included in the Required Fund Deposit calculation.

FICC is proposing to eliminate the reference to “Blackout Period Exposure Charge” because this component would no longer be included in the Required Fund Deposit calculation.

FICC is proposing to renumber this section in order to accommodate the above-referenced proposed changes.

FICC is proposing to define “Net Unsettled Position” because it is a defined term in GSD Rule 1.

FICC is proposing to amend this section to state that a haircut method would be utilized based on the historic index volatility model for the purposes of calculating the VaR Charge for classes of securities that cannot be handled by the VaR model’s methodology.

FICC is proposing to delete the paragraph relating to the Margin Proxy because the Margin Proxy would no longer be used to supplement the VaR Charge.

## **K. Description of the QRM Methodology**

The QRM Methodology document provides the methodology by which FICC would calculate the VaR Charge with the proposed sensitivity approach as well as other components of the Required Fund Deposit calculation. The QRM Methodology document specifies (i) the model inputs, parameters, assumptions and qualitative adjustments, (ii) the calculation used to generate Required Fund Deposit amounts, (iii) additional calculations used for benchmarking and monitoring purposes, (iv) theoretical analysis, (v) the process by which the VaR methodology was developed as well as its application and limitations, (vi) internal business requirements associated with the implementation and ongoing monitoring of the VaR methodology, (vii) the model change management process and governance framework (which includes the escalation process for adding a stressed period to the VaR calculation), (viii) the haircut methodology, (ix) the Blackout Period Exposure Adjustment calculations, (x) intraday margin calculation, and (xi) the Margin Proxy calculation.

### **II. Anticipated Effect on and Management of Risks**

FICC believes that the proposed change to the Required Fund Deposit calculation, which consists of proposals to (1) change its method of calculating the VaR Charge component, (2) add a new component referred to as the Blackout Period Exposure Adjustment, (3) eliminate the Blackout Period Exposure Charge and the Coverage Charge components, (4) amend the Backtesting Charge component to (i) include the backtesting deficiencies of certain GCF Counterparties during the Blackout Period and (ii) give GSD the ability to assess the Backtesting Charge on an intraday basis for all Netting Members, and (5) amend the calculation for determining the Excess

Capital Premium for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members, would enable FICC to better limit its exposure to Netting Members arising out of the activity in their portfolios.

**A. Proposed changes to GSD's calculation of the VaR Charge**

**1. Proposed change to replace the full revaluation approach with the sensitivity approach**

FICC's proposal to change the existing VaR methodology from one that employs a full revaluation approach to one that employs a sensitivity approach would affect FICC's management of risk by addressing the deficiencies observed in the current model by leveraging external vendor expertise in supplying the market risk attributes that would then be incorporated by FICC into its model to calculate the VaR Charge to Members. The proposed methodology would enhance FICC's risk management capabilities because it would enable sensitivity analysis of key model parameters and assumptions. The sensitivity approach would allow FICC to attribute market price moves to various risk factors (such as key rates, agency spread, and mortgage basis) that would enable FICC to view and respond more effectively to market volatility.

As noted above, the proposed sensitivity approach would leverage external vendor expertise in supplying the market risk attributes. FICC would manage the risks associated with a potential data disruption by using the most recently available data on the first day that a data disruption occurs. If it is determined that the vendor would resume providing data within five (5) business days, FICC management would determine whether the VaR Charge should continue to be calculated by using the most recently available data along with an extended look-back period or whether the Margin Proxy should be invoked.

**2. Proposed change to amend the VaR Charge to eliminate the augmented volatility adjustment multiplier.**

FICC's proposal to eliminate the augmented volatility adjustment multiplier would affect FICC's management of risk because the augmented volatility adjustment multiplier would no longer be necessary given that the proposed sensitivity approach would have a longer look-back period and the ability to include an additional stressed market condition to account for periods of market volatility. As described in Item II. (B) I. above, the proposed sensitivity approach would provide FICC with the ability to leverage a 10-year look-back period plus, to the extent applicable, an additional stressed period for purposes of calculating the VaR Charge. FICC's ability to extend the look back period would help to ensure that the historical simulation contains a sufficient number of market conditions (including but not limited to stressed market conditions), which would allow FICC to manage risks by more effectively capturing the risk profile of Netting Members during times of market stress.

**3. Proposed change to implement the Margin Proxy as the VaR Charge during a vendor data disruption**

FICC's proposal to employ the Margin Proxy as an alternative volatility calculation rather than as a minimum volatility calculation would affect FICC's management of risk by helping to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model.

As described in Item II.(B)I. above, if the vendor fails to provide any data or a significant portion of the data timely, FICC would use the most recently available data on the first day that such data disruption occurs. If it is determined that the vendor will

resume providing data within five (5) business days, FICC management would determine whether the VaR Charge should continue to be calculated by using the most recently available data along with an extended look-back period or whether the Margin Proxy should be invoked, subject to the approval of DTCC's Group Chief Risk Officer or his/her designee. If it is determined that the data disruption will extend beyond five (5) business days, the Margin Proxy would be applied, subject to the approval of the MRC followed by notification to FICC's Board Risk Committee.

**4. Proposed change to utilize a haircut method to measure the risk exposure of securities that lack historical data**

FICC's proposal to implement a haircut method for securities that lack sufficient historical information would affect FICC's management of risk because the proposed change would better describe FICC's method of capturing the risk profile of these securities, thus helping to ensure that sufficient margin would be calculated for the related portfolios. FICC would continue to manage the market risk of clearing securities with inadequate historical data by conducting analysis on the type of securities that do not fall within the historical look-back period of the proposed VaR model and engaging in periodic reviews of the haircuts used for calculating margin for these types of securities.

**5. Proposed change to amend the VaR Charge calculation to establish a VaR Floor**

FICC's proposal to implement the VaR Floor would affect FICC's management of risk because the proposed VaR Floor would address a risk that the proposed sensitivity approach could calculate a VaR Charge that is too low in connection with certain portfolios where the proposed VaR model applies substantial risk offsets among long and short positions in different classes of securities that have historical price

correlation. Since this level of historical price correlation may not apply in future changing market conditions, FICC believes that it is prudent to apply a VaR Floor that is based upon the market value of the gross of unsettled positions in the Netting Member's portfolio. The VaR Floor would therefore provide GSD with sufficient margin in the event that FICC is required to liquidate in different market conditions.

**B. Proposed change to establish the Blackout Period Exposure Adjustment as a component to the Required Fund Deposit calculation**

FICC's proposal to establish the Blackout Period Exposure Adjustment would affect FICC's management of risk because the Blackout Period Exposure Adjustment would better protect GSD and its Netting Members from losses that could result from overstated values of mortgage-backed securities pledged as collateral for GCF Repo Transactions during the Blackout Period. FICC believes that the proposed adjustment would help to maintain GCF Counterparties' backtesting coverage above the 99% confidence threshold because the proposed Blackout Period Exposure Adjustment would be applied to the VaR Charge for all GCF Counterparties with GCF Repo Transactions collateralized with mortgage-backed securities during the monthly Blackout Period. In the event that a GCF Counterparty continues to experience backtesting deficiencies, FICC would apply the existing Backtesting Charge pursuant to the GSD Rules, which would be amended to consider deficiencies attributable to Blackout Period exposures during the Blackout Period.

**C. Proposed change to eliminate the Coverage Charge from the Required Fund Deposit calculation**

FICC's proposal to eliminate the Coverage Charge component from GSD's Required Fund Deposit calculation would affect FICC's management of risk because the

proposed change would remove an unnecessary component from the Required Fund Deposit calculation. As described above, the Coverage Charge is based on historical portfolio activity, which may not be indicative of a Netting Member's current risk profile but was determined by FICC to be appropriate to address potential shortfalls in margin charges under the current VaR model. As part of FICC's development and assessment of the proposed VaR Charge, FICC obtained an independent validation of the proposed model by an external party, performed back testing to validate model performance, and conducted analysis to determine the impact of the changes to Netting Members. Results of the analysis indicate that the proposed sensitivity approach would be more responsive to changing market dynamics and provide better coverage than the existing full revaluation approach. Given the proposed improvement in model coverage, FICC believes that the Coverage Charge component would no longer be necessary.

**D. Proposed change to eliminate the existing Blackout Period Exposure Charge**

The proposed Blackout Period Exposure Adjustment would allow GSD to eliminate the existing Blackout Period Exposure Charge because the proposed Blackout Period Exposure Adjustment would be applied to all GCF Counterparties with GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period, while the existing Blackout Period Exposure Charge only applies to GCF Counterparties that have two or more backtesting deficiencies that occurred during the Blackout Period and whose overall 12-month trailing backtesting coverage falls below the 99% coverage target. FICC believes that the proposed Blackout Period Exposure Adjustment would help to maintain GCF Counterparties' backtesting coverage above the 99% confidence threshold. In the event that a GCF Counterparty continues to

experience backtesting deficiencies, FICC would apply the existing Backtesting Charge pursuant to the GSD Rules. As described below, the Backtesting Charge would be amended to include deficiencies related to Blackout Period Exposure during the Blackout Period. Given the proposed Blackout Period Exposure Adjustment and the amendment of the Backtesting Charge, FICC believes that the existing Blackout Period Exposure Charge component would no longer be necessary.

**E. Proposed change to expand GSD's authority to assess the Backtesting Charge and amend the charge during the Blackout Period**

FICC's proposal to assess an Intraday Backtesting Charge on a Netting Member's portfolio during the trading day would affect FICC's management of risk because it would address the risk that a Netting Member's most recently collect Required Fund Deposit may be insufficient to cover its intraday trading activity. Thus, the proposed change would give FICC the ability to better limit its credit exposures to Netting Members on an intraday basis.

FICC's proposal to amend the charge to consider deficiencies attributable to Blackout Period exposures would be included only during the Blackout Period would address the risk that a defaulted GCF Counterparty's portfolio contains exposure to GCF Transactions collateralized with mortgage-backed securities that is not adequately captured by the GCF Counterparty's Required Fund Deposit. Thus, the proposed change would allow FICC to continue to maintain coverage of FICC's credit exposures to such GCF Repo Participant at a high degree of confidence during the period when this risk regarding the valuation of such GCF Transactions could exist.

**F. Proposed change to the Excess Capital Premium calculation for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting**

FICC believes that the proposed change to move to a net capital measure for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members would affect FICC's management of risk because the proposed change would better align the Excess Capital Premium for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members to a measure that would be consistent with the equity capital measure that is currently used for Bank Netting Members in the Excess Capital Premium calculation, while continuing to provide an effective means to manage risks posed by a Netting Member whose activity causes it to have VaR Charge that is greater than its regulatory capital.

**G. GSD's existing calculation and assessment of Intraday Supplemental Fund Deposit amounts**

FICC's proposal to provide transparency with respect to GSD's current practice of calculating Intraday Supplemental Fund Deposits would affect FICC's management of risk because it would help Netting Members understand the process and circumstances under which GSD may collect Intraday Supplemental Fund Deposit from Netting Members. The collection of Intraday Supplemental Fund Deposits is designed to mitigate FICC's exposure resulting from large intraday fluctuations in Netting Members' portfolios due to new and settled trade activities.

**H. FICC's Outreach to GSD Netting Members**

FICC managed the effect of the overall proposal by conducting extensive outreach with Netting Members regarding the proposed changes, educating Netting Members on the reasons for these proposed changes, and explaining the related risk

management improvements. FICC invited all Netting Members to customer forums in an effort to provide transparency regarding the changes and the expected macro impact across the membership. FICC also provided each Netting Member with individual impact studies. In addition, prior to the implementation of the proposed changes, FICC would run a parallel period during which Netting Members would have the opportunity to further review the possible impact.

III. Consistency with the Clearing Supervision Act

Although the Clearing Supervision Act does not specify a standard of review for an advance notice, its stated purpose is instructive: to mitigate systemic risk in the financial system and promote financial stability by, among other things, promoting uniform risk management standards for systemically important financial market utilities and strengthening the liquidity of systemically important financial market utilities.<sup>70</sup>

Section 805(a)(2) of the Clearing Supervision Act<sup>71</sup> authorizes the Commission to prescribe risk management standards for the payment, clearing and settlement activities of designated clearing entities, like FICC, and financial institutions engaged in designated activities for which the Commission is the supervisory agency or the appropriate financial regulator. Section 805(b) of the Clearing Supervision Act<sup>72</sup> states that the objectives and principles for the risk management standards prescribed under Section 805(a) shall be to, among other things, promote robust risk management, promote safety and soundness,

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<sup>70</sup> See 12 U.S.C. 5461(b).

<sup>71</sup> See 12 U.S.C. 5464(a)(2).

<sup>72</sup> See 12 U.S.C. 5464(b).

reduce systemic risks, and support the stability of the broader financial system. The Commission has adopted risk management standards under Section 805(a)(2) of the Clearing Supervision Act<sup>73</sup> and Section 17A of the Exchange Act (“Covered Clearing Agency Standards”).<sup>74</sup> The Covered Clearing Agency Standards require registered clearing agencies to establish, implement, maintain, and enforce written policies and procedures that are reasonably designed to meet certain minimum requirements for their operations and risk management practices on an ongoing basis.<sup>75</sup>

(i) **Consistency with Section 805(b) of the Clearing Supervision Act**

For the reasons described below, FICC believes that the proposed changes in this advance notice are consistent with the objectives and principles of these risk management standards as described in Section 805(b) of the Clearing Supervision Act and in the Covered Clearing Agency Standards.

As discussed above, FICC is proposing a number of changes to GSD’s Required Fund Deposit calculation – a key tool that FICC uses to mitigate potential losses to FICC associated with liquidating a Netting Member’s portfolio in the event of Netting Member default. FICC believes the proposed changes are consistent with promoting robust risk management because they are designed to enable FICC to better limit its exposure to Members in the event of a Member default. Specifically, (1) the proposed change to utilize the sensitivity approach would enable FICC to better limit its exposure to Netting

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<sup>73</sup> See 12 U.S.C. 5464(a)(2)

<sup>74</sup> See 17 CFR 240.17Ad-22(e).

<sup>75</sup> Id.

Members because the sensitivity approach would incorporate a broad range of structured risk factors as well as an extended look-back period that would calculate better margin coverage for FICC, (2) the proposed use of the Margin Proxy as an alternative volatility calculation would enable FICC to better limit its exposure to Netting Members because it would help to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model, (3) the proposed haircut method would enable FICC to better limit its exposure to Netting Members because it would provide a better assessment of the risks associated with classes of securities with inadequate historical pricing data, (4) the proposed VaR Floor would enable FICC to better limit its exposure to Netting Members because it would help to ensure that each Netting Member has a minimum VaR Charge in the event that the proposed VaR model utilizing the sensitivity approach yields too low a VaR Charge for such portfolios, (5) the proposal to add the proposed Blackout Period Exposure Adjustment as a new component and the proposal to amend the Backtesting Charge to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period would enable FICC to better limit its exposure to Netting Members because these changes would help to ensure that FICC collects sufficient margin from GCF Counterparties with GCF Repo Transactions collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation during the Blackout Period, (6) the proposed Intraday Backtesting Charge would enable FICC to better limit its exposure to Netting Members because it would help to ensure that FICC collects

appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day, and (7) the proposed change to the Excess Capital Premium calculation would enable FICC to better limit its exposure to Netting Members because it would help to ensure that FICC does not unnecessarily increase its calculation and collection of Required Fund Deposit amounts for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members. Finally, FICC's proposal to eliminate the Blackout Period Exposure Charge, Coverage Charge and augmented volatility adjustment multiplier would enable FICC to eliminate components that do not measure risk as accurately as the proposed and existing risk management measures, as described above.

Therefore, because the proposal is designed to enable FICC to better limit its exposure to Netting Members in the manner described above, FICC believes it is consistent with promoting robust risk management.

Furthermore, FICC believes that the changes proposed in this advance notice are consistent with promoting safety and soundness, which, in turn, is consistent with reducing systemic risks and supporting the stability of the broader financial system, consistent with Section 805(b) of the Clearing Supervision Act.<sup>76</sup> As described in the second paragraph above, the proposed changes are designed to better limit FICC's exposures to Netting Members in the event of a Netting Member default. FICC believes that by better limiting its exposures to Netting Members in the event of a Netting

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<sup>76</sup> See 12 U.S.C. 5464(b).

Member's default, the proposed changes are consistent with promoting safety and soundness, which, in turn, is consistent with reducing systemic risks and supporting the stability of the broader financial system.

**(ii) Consistency with Rule 17Ad-22(e)(4)(i) and (e)(6)(i), (ii), (iii), (iv) and (v) under the Act**

FICC believes that the proposed changes listed above are consistent with Rules 17Ad-22(e)(4)(i) and (e)(6)(i), (ii), (iii), (iv) and (v) of the Act.<sup>77</sup>

Rule 17Ad-22(e)(4)(i) under the Act<sup>78</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to effectively identify, measure, monitor, and manage its credit exposures to participants and those exposures arising from its payment, clearing, and settlement processes by maintaining sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence.

FICC believes that the proposed changes described in Item II.(B) I. above enhance FICC's ability to identify, measure, monitor and manage its credit exposures to Netting Members and those exposures arising from its payment, clearing, and settlement processes because the proposed changes would collectively help to ensure that FICC maintains sufficient financial resources to cover its credit exposure to each Netting Member with a high degree of confidence.

Because each of the proposed changes to FICC's Required Fund Deposit calculation would provide FICC with a more effective measure of the risks that these

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<sup>77</sup> See 17 CFR 240.17Ad-22(e)(4)(i) and (e)(6)(i), (ii), (iii), (iv) and (v).

<sup>78</sup> See 17 CFR 240.17Ad-22(e)(4)(i).

calculations were designed to assess, the proposed changes would permit FICC to more effectively identify, measure, monitor and manage its exposures to market price risk, and would enable it to better limit its exposure to potential losses from Netting Member default. Specifically, the proposed changes described in Item II.(B)I. above are designed to help ensure that GSD appropriately calculates and collects margin to cover its credit exposure to each Netting Member with a high degree of confidence because (1) the proposed change to utilize the sensitivity approach would provide better margin coverage for FICC, (2) the proposed use of the Margin Proxy as an alternative volatility calculation would help to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model, (3) the proposed haircut method would provide a better assessment of the risks associated with classes of securities with inadequate historical pricing data, (4) the proposed VaR Floor would limit FICC's credit exposures to Netting Members in the event that the proposed VaR model utilizing the sensitivity approach yields too low a VaR Charge for such portfolios, (5) the proposal eliminates the Blackout Period Exposure, Coverage Charge and augmented volatility adjustment multiplier because FICC should not maintain elements of the prior model that would unnecessarily increase Netting Members' Required Fund Deposits, (6) the proposal to add the proposed Blackout Period Exposure Adjustment as a new component would limit FICC's credit exposures during the Blackout Period caused by GCF Repo Transactions collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation, (7) the proposal to

amend the Backtesting Charge to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period would help to ensure that FICC could cover credit exposure to GCF Counterparties, (8) the proposed Intraday Backtesting Charge would help to ensure that FICC collects appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day, and (9) the proposed change to the Excess Capital Premium calculation would help to ensure that FICC does not unnecessarily increase its calculation and collection of Required Fund Deposit amounts for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members.

The proposed changes would continue to be subject to performance reviews by FICC. In the event that FICC's backtesting process reveals that the VaR Charge, Required Fund Deposit amounts and/or the Clearing Fund do not meet FICC's 99% confidence level, FICC would review its margin methodologies and assess whether any changes should be considered. Therefore, FICC believes the proposed changes are consistent with the requirements of Rule 17Ad-22(e)(4)(i) of the Act cited above. Rule 17Ad-22(e)(6)(i) under the Act<sup>79</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system

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<sup>79</sup> See 17 CFR 240.17Ad-22(e)(6)(i).

that, at a minimum, considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.

FICC believes that the proposed changes referenced above in the second paragraph of this section (each of which have been described in detail in Item II.(B).I. above) are consistent with Rule 17Ad-22(e)(6)(i) of the Act cited above because the proposed changes would help to ensure that FICC calculates and collects adequate Required Fund Deposit amounts, and that each Netting Member's amount is commensurate with the risks and particular attributes of each relevant product, portfolio, and market. Specifically, (1) the proposed change to utilize the sensitivity approach would provide better margin coverage for FICC, (2) the proposed use of the Margin Proxy as an alternative volatility calculation would help to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model, (3) the proposed haircut method would provide a better assessment of the risks associated with classes of securities with inadequate historical pricing data, (4) the proposed VaR Floor would limit FICC's credit exposures to Netting Members in the event that the proposed VaR model utilizing the sensitivity approach yields too low a VaR Charge for such portfolios, (5) the proposal eliminates the Blackout Period Exposure, Coverage Charge and augmented volatility adjustment multiplier because FICC should not maintain elements of the prior model that would unnecessarily increase Netting Members' Required Fund Deposits, (6) the proposal to add the proposed Blackout Period Exposure Adjustment as a new component would limit FICC's credit exposures during the Blackout Period

caused by GCF Repo Transactions collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation, (7) the proposal to amend the Backtesting Charge to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period would help to ensure that FICC could cover credit exposure to GCF Counterparties, (8) the proposed Intraday Backtesting Charge would help to ensure that FICC collects appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day, and (9) the proposed change to the Excess Capital Premium calculation would help to ensure that FICC does not unnecessarily increase its calculation and collection of Required Fund Deposit amounts for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members.

Therefore, FICC believes that the proposed changes are consistent with the requirements of Rule 17Ad-22(e)(6)(i) cited above because the collective proposed rule changes would consider, and produce margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.

Rule 17Ad-22(e)(6)(ii) under the Act<sup>80</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, marks participant positions to market and collects margin, including

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<sup>80</sup> See 17 CFR 240.17Ad-22(e)(6)(ii).

variation margin or equivalent charges if relevant, at least daily and includes the authority and operational capacity to make intraday margin calls in defined circumstances.

FICC believes that the proposed changes are consistent Rule 17Ad-22(e)(6)(ii) of the Act cited above because the proposed Intraday Backtesting Charge would help to ensure that FICC collects appropriate margin from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day. Therefore, FICC believes that the proposed Intraday Backtesting Charge would provide GSD with the authority and operational capacity to make intraday margin calls in a manner that is consistent with Rule 17Ad-22(e)(6)(ii) of the Act cited above.

Rule 17Ad-22(e)(6)(iii) under the Act<sup>81</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, calculates margin sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default.

FICC believes that the proposed changes are consistent Rule 17Ad-22(e)(6)(iii) of the Act cited above because the proposed changes are designed to calculate Required Fund Deposit amounts that are sufficient to cover FICC's potential future exposure to

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<sup>81</sup> See 17 CFR 240.17Ad-22(e)(6)(iii).

Netting Members in the interval between the last margin collection and the close out of positions following a participant default. Specifically, (1) the proposed change to utilize the sensitivity approach would provide better margin coverage for FICC, (2) the proposed use of the Margin Proxy as an alternative volatility calculation would help to ensure that FICC has a margin methodology in place that effectively measures FICC's exposure to Netting Members in the event that a vendor data disruption reduces the reliability of the margin amount calculated by the proposed sensitivity-based VaR model, (3) the proposed haircut method would provide a better assessment of the risks associated with classes of securities with inadequate historical pricing data, (4) the proposed VaR Floor would limit FICC's credit exposures to Netting Members in the event that the proposed VaR model utilizing the sensitivity approach yields too low a VaR Charge for such portfolios, (5) the proposal eliminates the Blackout Period Exposure, Coverage Charge and augmented volatility adjustment multiplier because FICC should not maintain elements of the prior model that would unnecessarily increase Netting Members' Required Fund Deposits, (6) the proposal to add the proposed Blackout Period Exposure Adjustment as a new component would limit FICC's credit exposures during the Blackout Period caused by GCF Repo Transactions collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation, (7) the proposal to amend the Backtesting Charge to consider backtesting deficiencies attributable to GCF Repo Transactions collateralized with mortgage-backed securities during the Blackout Period would help to ensure that FICC could cover credit exposure to GCF Counterparties, (8) the proposed Intraday Backtesting Charge would help to ensure that FICC collects appropriate margin

from Netting Members that have backtesting deficiencies during the trading day due to large fluctuations of intraday trading activity that could pose risk to FICC in the event that such Netting Members defaults during the trading day, and (9) the proposed change to the Excess Capital Premium calculation would help to ensure that FICC does not unnecessarily increase its calculation and collection of Required Fund Deposit amounts for Broker Netting Members, Inter-Dealer Broker Netting Members and Dealer Netting Members.

Therefore, FICC believes that the proposed changes would be consistent with Rule 17Ad-22(e)(6)(iii) of the Act cited above because the proposed rules changes would collectively be designed to help ensure that FICC calculates Required Fund Deposit amounts that are sufficient to cover FICC's potential future exposure to Netting Members in the interval between the last margin collection and the close out of positions following a participant default.

Rule 17Ad-22(e)(6)(iv) under the Act<sup>82</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, uses reliable sources of timely price data and procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.

FICC believes that the proposed change to implement a haircut method for securities that lack sufficient historical information is consistent with Rule 17Ad-

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<sup>82</sup> See 17 CFR 240.17Ad-22(e)(6)(iv).

22(e)(6)(iv) of the Act cited above because the proposed change would allow FICC to use appropriate market data to estimate an appropriate margin at a 99% confidence level, thus helping to ensure that sufficient margin would be calculated for portfolios that contain these securities.

Rule 17Ad-22(e)(6)(v) under the Act<sup>83</sup> requires a clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, uses an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products.

FICC believes that the proposed changes to implement a haircut method for securities that lack sufficient historical information is consistent with Rule 17Ad-22(e)(6)(v) of the Act cited above because the haircut method would allow FICC to use appropriate market data to estimate an appropriate margin at a 99% confident level, thus helping to ensure that sufficient margin would be calculated for portfolios that contain these securities.

FICC also believes that its proposal to replace the Blackout Period Exposure Charge with the Blackout Period Exposure Adjustment is consistent with Rule 17Ad-22(e)(6)(v) of the Act cited above because the proposed Blackout Period Exposure Adjustment would limit FICC's credit exposures during the Blackout Period caused by portfolios with collateralized mortgage-backed securities with risk characteristics that are not effectively captured by the Required Fund Deposit calculation.

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<sup>83</sup> See 17 CFR 240.17Ad-22(e)(6)(v).

Therefore, FICC believes that the proposed haircut method and the proposed Blackout Period Exposure Adjustment are consistent with Rule 17Ad-22(e)(6)(v) of the Act cited above because the proposed changes appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products.

III. Date of Effectiveness of the Advance Notice, and Timing for Commission Action

The proposed change may be implemented if the Commission does not object to the proposed change within 60 days of the later of (i) the date that the proposed change was filed with the Commission or (ii) the date that any additional information requested by the Commission is received. The clearing agency shall not implement the proposed change if the Commission has any objection to the proposed change.

The Commission may extend the period for review by an additional 60 days if the proposed change raises novel or complex issues, subject to the Commission providing the clearing agency with prompt written notice of the extension. A proposed change may be implemented in less than 60 days from the date the advance notice is filed, or the date further information requested by the Commission is received, if the Commission notifies the clearing agency in writing that it does not object to the proposed change and authorizes the clearing agency to implement the proposed change on an earlier date, subject to any conditions imposed by the Commission.

The clearing agency shall post notice on its website of proposed changes that are implemented.

The proposal shall not take effect until all regulatory actions required with respect to the proposal are completed.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the Advance Notice is consistent with the Clearing Supervision 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](mailto:rule-comments@sec.gov). Please include File Number SR-FICC-2018-801 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-FICC-2018-801. 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 Advance Notice that are filed with the Commission, and all written communications relating to the Advance Notice 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 FICC and on DTCC's website (<http://dtcc.com/legal/sec-rule-filings.aspx>). All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-FICC-2018-801 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

By the Commission.

Secretary

**FIXED INCOME CLEARING CORPORATION**  
**GOVERNMENT SECURITIES DIVISION**  
**BACKTESTING RESULTS**

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**FIXED INCOME CLEARING CORPORATION**

**GOVERNMENT SECURITIES DIVISION**

**IMPACT ANALYSIS**

**1/3/2013 – 12/30/2016**

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**FIXED INCOME CLEARING CORPORATION**

**GOVERNMENT SECURITIES DIVISION**

**IMPACT ANALYSIS**

**5/1/2017 – 11/30/2017**

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**Bold and underlined text** indicates proposed added language

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**FIXED INCOME CLEARING CORPORATION  
GOVERNMENT SECURITIES DIVISION RULEBOOK**

## RULE 1 – DEFINITIONS

Approved but not yet operative changes to this Rule 1, as amended by File Nos. SR-FICC-2018-001 and SR-FICC-2018-801, are set forth below. Underlined and boldface text indicates added language. Strikethrough and boldface text indicates deleted language. These changes will become operative within 45 Business Days after the later date of the SEC’s approval order of File No. SR-FICC-2018-001 and notice of no objection to File No. SR-FICC-2018-801. Once operative, this legend will automatically be removed from the Rules and the formatting of the text of the changes in this Rule 1 will automatically be revised to reflect that these changes are operative.

Unless the context requires otherwise, the terms defined in this Rule shall, for all purposes of these Rules, have the meanings herein specified.

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### **Backtesting Charge**

The term “Backtesting Charge” means an additional charge that may be added to a Netting Member’s VaR Charge to mitigate exposures to the Corporation caused by settlement risks that may not be adequately captured by the Corporation’s portfolio volatility model. The Corporation may assess this charge on a Netting Member’s start of the day portfolio (the “Regular Backtesting Charge”) and/or its intraday portfolios (the “Intraday Backtesting Charge”), as needed, to enable the Corporation to achieve its backtesting coverage target. The Regular Backtesting Charge and the Intraday Backtesting Charge may apply to Netting Members that have 12-month trailing backtesting coverage below the 99 percent backtesting coverage target, excluding deficiencies attributable to Blackout Period exposures. The Regular Backtesting Charge and the Intraday Backtesting Charge, as applicable, shall generally be equal to the Netting Member’s third largest deficiency that occurred during the previous 12 months, ~~excluding any deficiencies attributable to Blackout Period exposures.~~ Deficiencies attributable to Blackout Period exposures would be included only during the Blackout Period. The Corporation may in its discretion adjust such charge if the Corporation determines that circumstances particular to a Netting Member’s settlement activity and/or market price volatility warrant a different approach to determining or applying such charge in a manner consistent with achieving the Corporation’s backtesting coverage target.

\* \* \* \*

### **Blackout Period Exposure Adjustment**

The term “Blackout Period Exposure Adjustment” means an additional charge or a reduction that may be added to a GCF Counterparty’s VaR Charge to mitigate exposures to the Corporation that may arise due to potential overvaluation of mortgage-backed securities pledged to collateralize GCF Repo Transactions during the Blackout Period. The Blackout Period Exposure Adjustment shall apply to

GCF Counterparties that are exposed to potential overvaluation of mortgage-backed securities pledged as collateral during the Blackout Period. The Blackout Period Exposure Adjustment shall be based on a projected average pay-down rate of the applicable mortgage-backed securities. The Corporation may in its discretion adjust or waive such adjustment if the Corporation determines that circumstances particular to the GCF Counterparty's use of mortgage-backed security pledges or to the mortgage-backed securities so pledged warrant a different approach to determining or applying such adjustment in a manner consistent with achieving the Corporation's backtesting coverage target.

### **Blackout Period Exposure Charge**

~~The term "Blackout Period Exposure Charge" means an additional charge that may be added to a GCF Counterparty's VaR Charge to mitigate exposures to the Corporation that may arise due to potential overvaluation of mortgage-backed securities pledged to collateralize GCF Repo Transactions during the Blackout Period. The Blackout Period Exposure Charge shall apply to GCF Counterparties that have 12-month trailing backtesting coverage below 99 percent where two or more historical deficiencies are determined by the Corporation to have been caused by overvaluation of mortgage-backed securities pledged as collateral during the Blackout Period. The Blackout Period Exposure Charge shall generally be equal to the midpoint between the GCF Counterparty's largest two deficiencies occurring during the Blackout Period. The Corporation may in its discretion adjust or waive such charge if the Corporation determines that circumstances particular to the GCF Counterparty's use of mortgage-backed security pledges or to the mortgage-backed securities so pledged warrant a different approach to determining or applying such charge in a manner consistent with achieving the Corporation's backtesting coverage target. A GCF Counterparty that is subject to the charge may notify the Corporation in writing that it will discontinue or materially reduce its mortgage-backed security pledges, and, if it promptly takes such action, FICC shall waive or reduce the charge accordingly.~~

\* \* \* \*

### **Coverage Charge**

~~The term "Coverage Charge" means with respect to a Netting Member's Required Fund Deposit, an additional charge to bring the Member's coverage to a targeted confidence level.~~

\* \* \* \*

### **Excess Capital**

~~The term "Excess Capital" means Excess Net Capital, net assets or equity capital as applicable, to a Netting Member based on its type of regulation.~~

\* \* \* \*

### **Excess Capital Ratio**

The term “Excess Capital Ratio” means the quotient, rounded to the nearest two decimal places, resulting from dividing the amount of a Netting Member’s VaR Charge by the amount of its ~~Excess~~ Netting Member Capital that it maintains.

\* \* \* \*

### **Intraday Supplemental ~~Clearing~~ Fund Deposit**

The term “Intraday Supplemental ~~Clearing~~ Fund Deposit” means the additional deposit to the Clearing Fund required by the Corporation from a Member intraday pursuant to the provisions of Rule 4

\* \* \* \*

### **Margin Proxy**

The term “Margin Proxy” means, with respect to each Margin Portfolio, ~~a minimum-an~~ alternative volatility calculation for specified Net Unsettled Positions of a Netting Member, calculated using historical market price changes of such U.S. Treasury and agency pass-through mortgage-backed securities indices determined by the Corporation. The Margin Proxy would be applied by the Corporation as an ~~adjustment~~ alternative to the model-based volatility calculation of the VaR Charge for each Netting Member’s Margin Portfolio. The Margin Proxy shall cover such range of historical market price moves and parameters as the Corporation from time to time deems appropriate.

\* \* \* \*

### **Netting Member Capital**

**The term “Netting Member Capital” means Net Capital, net assets or equity capital as applicable, to a Netting Member based on its type of regulation.**

\* \* \* \*

### **VaR Charge**

The term “VaR Charge” means, with respect to each Margin Portfolio, a calculation of the volatility of specified Net Unsettled Positions of a Netting Member as of the time of such calculation. Such volatility calculations shall be made in accordance with any generally accepted portfolio volatility model, including, but not limited to, any margining formula employed by any other clearing agency registered under Section 17A of the Securities Exchange Act of 1934. Such calculation shall be made utilizing such assumptions (including confidence levels) and based on such observable market data as the Corporation deems reasonable, and shall cover such range and assessment of volatility as the Corporation from time to time deems appropriate. ~~If, with respect to the Margin Portfolio of a Netting Member, the model-based volatility calculation pursuant to this definition results in a lower amount than the Margin Proxy~~

~~calculated for that Margin Portfolio, then the Margin Proxy will be applied as the VaR Charge. To the extent that the primary source of such market data becomes unavailable for an extended period of time, the Corporation shall utilize the Margin Proxy as an alternative volatility calculation. If the volatility calculation is lower than an amount designated by the Corporation (the "VaR Floor") then the VaR Floor will be utilized as such Clearing Member's VaR Charge. Such VaR Floor will be determined by multiplying the absolute value of the sum of Net Long Positions and Net Short Positions of Eligible Securities, grouped by product and remaining maturity, by a percentage designated by the Corporation from time to time for such group. For U.S. Treasury and agency securities, such percentage shall be a fraction, no less than 10%, of the historical minimum volatility of a benchmark fixed income index for such group by product and remaining maturity. For mortgage-backed securities, such percentage shall be a fixed percentage that is no less than 0.05%.~~

\* \* \* \*

## RULE 4 – CLEARING FUND AND LOSS ALLOCATION

Approved but not yet operative changes to this Rule 4, as amended by File Nos. SR-FICC-2018-001 and SR-FICC-2018-801, are set forth below. Underlined and boldface text indicates added language. Strikethrough and boldface text indicates deleted language. These changes will become operative within 45 Business Days after the later date of the SEC’s approval order of File No. SR-FICC-2018-001 and notice of no objection to File No. SR-FICC-2018-801. Once operative, this legend will automatically be removed from the Rules and the formatting of the text of the changes in this Rule 4 will automatically be revised to reflect that these changes are operative.

\* \* \* \*

### Section 1b – Unadjusted GSD Margin Portfolio Amount

(a) Each Business Day, the Corporation shall determine, with respect to each Margin Portfolio, an Unadjusted GSD Margin Portfolio Amount as the sum of the following:

(i) the VaR Charge,

**plus**

~~(ii) the Coverage Charge,~~

minus

(iii) in the case of a Margin Portfolio of a Cross Margining Participant that is subject to one or more Cross-Margining Arrangements, in the discretion of the Corporation, an amount not to exceed the sum of any applicable Cross Margining Reductions, calculated on the current Business Day for such Cross-Margining Participant in accordance with the applicable Cross-Margining Agreements,

plus

~~(iii)~~ in the case of a Margin Portfolio of a GCF Counterparty, the GCF Premium Charge and/or GCF Repo Event Premium and/or the Early Unwind Intraday Charge, if applicable,

**plus or minus**

**(iv) in the case of a Margin Portfolio of a GCF Counterparty, the Blackout Period Exposure Adjustment, if applicable, during the monthly Blackout Period or until the applicable GCF Clearing Agent Bank updates the Pool Factors used for collateral valuation,**

plus

~~(v) in the case of a Margin Portfolio of a GCF Counterparty with backtesting deficiencies, the Blackout Period Exposure Charge, if applicable, during the monthly Blackout Period and until the applicable GCF Clearing Agent Bank updates the Pool Factors used for collateral valuation,~~

**plus**

~~(vi)—in the case of a Netting Member with backtesting deficiencies, the Backtesting Charge, if applicable,~~

**plus**

~~(vii) the Holiday Charge, if applicable, on the Business Day prior to a Holiday.~~

The Corporation shall determine a separate Unadjusted GSD Margin Portfolio Amount for a Netting Member's Market Professional Cross-Margining Account.

The Corporation shall have the discretion to not apply the VaR calculation(s) to ~~n~~**Net** ~~u~~**Unsettled** ~~p~~**Positions** in classes of securities whose volatility is less amenable to statistical analysis, or to Term Repo Transactions and Forward-Starting Repo Transactions (including term and forward-starting GCF Repo Transactions) whose term repo rate volatility is less amenable to statistical analysis. In lieu of such calculation, the component required with respect to such transactions shall instead be determined utilizing a haircut method based on a historic index volatility model.

The Corporation shall take into account the VaR confidence level applicable to the Member in calculating the VaR Charge ~~and Coverage Charge~~. In the case of a Margin Portfolio containing accounts of Permitted Margin Affiliates, the Corporation shall apply the highest VaR confidence level applicable to the Member or its Permitted Margin Affiliates.

~~When the Margin Proxy is applied as the VaR Charge, the Corporation shall reduce the Coverage Charge up to the amount that the Margin Proxy exceeds the sum of the model-based volatility calculation and the Coverage Charge, but not by an amount greater than the total Coverage Charge.~~

The Corporation shall have the discretion to calculate an additional amount ("special charge") applicable to a Margin Portfolio as determined by the Corporation from time to time in view of market conditions and other financial and operational capabilities of the Member. The Corporation shall make any such determination based on such factors as the Corporation determines to be appropriate from time to time.

The Corporation shall calculate the Unadjusted GSD Margin Portfolio Amount applicable to a Sponsoring Member Omnibus Account, and the Sponsoring Member Omnibus Account Required Fund Deposit, subject to the provisions set forth in Section 10 of Rule 3A.

The minimum Clearing Fund requirement applicable to an Inter-Dealer Broker Netting Member or a Netting Member that maintains one or more Broker Accounts shall at all times be no less than \$5 million.

Once applicable minimum Clearing Fund amounts have been applied, the Corporation shall apply any applicable additional payments, charges and premiums set forth in these Rules.

\* \* \* \*



**Methodology Document**  
**GSD Initial Market Risk Margin Model**

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