SECURITIES AND EXCHANGE COMMISSION


Self-Regulatory Organizations; National Securities Clearing Corporation; Notice of Filing of Amendment No. 1 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 1, To Enhance the Calculation of the Volatility Component of the Clearing Fund Formula That Utilizes a Parametric Value-at-Risk Model and Eliminate the Market Maker Domination Charge

February 26, 2018.

National Securities Clearing Corporation ("NSCC") filed with the U.S. Securities and Exchange Commission ("Commission") on December 28, 2017 proposed rule change SR–NSCC–2017–020 pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Exchange Act") and Rule 19b–4 thereunder. NSCC collects Required Fund, which NSCC can access should a defaulting Member’s own Required Fund be insufficient to satisfy NSCC’s potential losses associated with the liquidation of a Member’s portfolio should the Member default. The aggregate of all Members’ Required Deposits constitutes NSCC’s Clearing Fund, which NSCC can access should a defaulting Member’s own Required Deposit be insufficient to satisfy NSCC’s losses caused by the liquidation of the Member’s portfolio.

The proposed rule change was published for comment in the Federal Register on January 19, 2018. The Commission did not receive any comments on the proposed rule change. On January 10, 2018, NSCC filed Amendment No. 1 to the proposed rule change. The Commission is publishing this notice to solicit comment on Amendment No. 1 from interested persons and is approving the proposed rule change, as modified by Amendment No. 1 (hereinafter, the “Proposed Rule Change”), on an accelerated basis.

I. Description of the Proposed Rule Change

The Proposed Rule Change consists of changes to NSCC’s Rules & Procedures ("Rules") that would enhance NSCC’s method for calculating the daily margin requirement for each NSCC member ("Member"). Specifically, NSCC proposes to (1) add three new ways to calculate the volatility component of its Members’ margin requirements, and (2) eliminate an outdated component of the margin calculation, as described more fully below. NSCC states that the new volatility component calculations would enable NSCC to mitigate the credit risks presented by Member portfolios in a broader range of scenarios and market conditions than NSCC’s current volatility component calculation.

A key tool that NSCC uses to manage its credit exposures to Members is the daily calculation and collection of margin from each Member (“Required Deposit”). NSCC collects Required Deposits from Members to mitigate NSCC’s potential losses associated with the liquidation of a Member’s portfolio should the Member default. The aggregate of all Members’ Required Deposits constitutes NSCC’s Clearing Fund, which NSCC can access should a defaulting Member’s own Required Deposit be insufficient to satisfy NSCC’s losses caused by the liquidation of the Member’s portfolio.

A. Evenly-Weighted Volatility Estimation

Each Member’s Required Deposit consists of several components. Generally, the largest component of a Member’s Required Deposit is the volatility component, which is designed to capture the market price risk associated with each Member’s portfolio at a 99th percentile level of confidence. NSCC currently calculates the volatility component using a parametric Value-at-Risk ("VaR") model. NSCC’s current VaR calculation places more emphasis on recent market observations (such as recent price history) for the purpose of estimating current market price volatility levels, based on the assumption that the most recent price history is more relevant and accurate for measuring current market price volatility levels (referred to as an “exponentially-weighted volatility estimation”). However, volatility in the equity markets often rapidly reverts to more commonly observed levels, followed by a subsequent spike. While a VaR calculation that applies exclusively an exponentially-weighted volatility estimation can capture sudden increases in volatility, it may result in a swift decline in margin that does not adequately capture the risks related to a rapid decrease in market price volatility levels. NSCC proposes to mitigate this shortcoming by adding another method for computing the VaR calculation that does not diminish the value of older market observations. Specifically, NSCC proposes to add a VaR calculation that gives equal weight to all historical volatility observations during a specified look-back period (referred to by NSCC as an “evenly-weighted volatility estimation”), which could result in margin requirement amounts during non-volatile periods greater than margin requirement amounts based upon the exponentially-weighted volatility estimation. Under the proposal, NSCC would calculate both the exponentially-weighted volatility estimation and the newly-proposed volatility estimation, and the greater result would represent the “Core Parametric Estimation.”

B. Gap Risk Measure

In addition to the Core Parametric Estimation, NSCC proposes to add a second method for determining the volatility component of a Member’s Required Deposit. This second method, referred to as the Gap Risk Measure, would help address risks that are unique to Member portfolios that hold a concentrated position in a specific security. More specifically, when a Member’s portfolio holds a concentrated position in a specific...
security, such that the position represents a significant percentage of the entire portfolio’s value, the portfolio may be more susceptible to risks associated with issuer-specific events affecting the price of the concentrated security.25 Such events include earning reports, management changes, merger announcements, insolvency, or other unexpected issuer-specific events (collectively, “Gap Risk Events”).26 NSCC has observed that portfolios with a concentration level of more than 30 percent in a specific security tend to have backtesting coverage below the 90 percent confidence level.27 To mitigate the concentration risk posed by such portfolios, NSCC proposes the Gap Risk Measure, which would apply to all individual equities in a Member’s portfolio, but only when the Member holds a position in a security that meets a 30 percent concentration threshold relative to the remainder of the portfolio.28

NSCC also has observed that exchange-traded products (“ETPs”) that track a broad market index are generally not susceptible to Gap Risk Events.29 Accordingly, NSCC would not apply the Gap Risk Measure to positions in such index-based ETPs, even if the 30 percent concentration threshold is met.30 However, non-index-based ETPs and index-based ETPs that track a narrow market index are susceptible to Gap Risk Events, and would, therefore, be subject to the Gap Risk Measure, provided that the 30 percent concentration threshold is met.31 When applicable, NSCC would calculate the Gap Risk Measure by multiplying the gross market value of the largest (non-index) position in the portfolio by a percent of not less than 10 percent.32

C. Portfolio Margin Floor

In addition to the Core Parametric Estimation and the Gap Risk Measure, NSCC proposes to add a third method for determining the volatility component of a Member’s Required Deposit.33 This third method, referred to as the Portfolio Margin Floor, would help address risks that may not be adequately accounted for by the Core Parametric Estimation or the Gap Risk Measure.34 For example, a volatility component based solely on a parametric VaR model calculation may prove inadequate where there is low market price volatility and the portfolio holds either large gross market values or large net directional market values.35 In such cases, the model may not collect sufficient margin, which could hinder NSCC’s ability to effectively liquidate or hedge the Member’s portfolio in three business days.36

NSCC proposes the Portfolio Margin Floor to operate as a floor to (i.e., minimum amount of) a Member’s volatility component.37 Specifically, the Portfolio Margin Floor would be based on the balance and direction of the positions in the Member’s portfolio and would be designed to be proportional to the market value of the portfolio.38 The Portfolio Margin Floor would be the sum of two separate calculations, both of which would measure the market value of the portfolio based on the direction of net positions in the portfolio.39 First, NSCC would calculate the net directional market value of the portfolio by calculating the absolute difference between the market value of the long positions and shorts positions in the portfolio,40 then multiplying that amount by a percentage.41 Second, NSCC would calculate the balanced market value of the portfolio by taking the lowest market value of either the long or short positions in the portfolio,42 then multiplying that value by a look-back period.43 The result would then be rounded up to the nearest whole percentage.44

Finally, in order to choose the amount to be charged as the volatility component of a Member’s Required Deposit, NSCC would compare the amounts calculated by the Portfolio Margin Floor, the Gap Risk Measure (if applicable), and the Core Parametric Estimation. NSCC then would use the highest of those three calculations as the volatility component of the Member’s Required Deposit.45

D. Elimination of the Market Maker Domination Component

NSCC proposes to eliminate the Market Maker Domination Component (“MMD Charge”) from its Clearing Fund formula.46 The MMD Charge is an existing component of the Clearing Fund formula calculated for Members that are Market Makers and Members that clear for Market Makers.47 The MMD Charge was developed to address the risks presented by concentrated positions (of the overall unsettled long position in the security) held by Market Makers.48 More specifically, the charge is designed to address securities that are susceptible to marketability and liquidation impairment because of the relative size of the positions that NSCC would have to liquidate or hedge in the case of a Market Maker default.49

Under the current Rules, NSCC may impose the MMD Charge if the Market Maker (either the Member or the correspondent of the Member) holds a position that is greater than 40 percent of the overall unsettled long position (i.e., the sum of each clearing broker’s net long position) in a specific security.50 NSCC calculates the MMD Charge as the sum of each of the absolute values of the net positions in the relevant securities, less the reported amount of excess net capital for that Member.51 NSCC states that since implementation of the MMD Charge,
several developments in the U.S. equity markets (e.g., improved price transparency, access across exchange venues, and participation by market liquidity providers) have reduced the risks that the MMD Charge was designed to address.\textsuperscript{52} NSCC further states that the MMD Charge may not effectively address concentration risk because the MMD Charge (1) only applies to positions in certain securities, as described above, (2) does not address concentration risk presented by positions in securities that are not listed on NASDAQ or in securities traded by firms that are not Market Makers, and (3) does not account for concentration in market capitalization categories.\textsuperscript{53} NSCC states that the proposed Gap Risk Measure would provide better concentration risk coverage than the MMD Charge because the former would apply to all Members, whereas the latter only applies to Market Makers.\textsuperscript{54}

II. Discussion and Commission Findings

Section 19(b)(2)(C) of the Exchange Act\textsuperscript{55} directs the Commission to approve a proposed rule change of a self-regulatory organization if it finds that such proposed rule change is consistent with the requirements of the Exchange Act and rules and regulations thereunder applicable to such organization. The Commission believes that the Proposed Rule Change is consistent with the Exchange Act, specifically Section 17A(b)(3)(F) of the Exchange Act and Rules 17Ad–22(e)(4) and (6) under the Exchange Act.\textsuperscript{56}

A. Consistency With Section 17A(b)(3)(F) of the Exchange Act

The Commission finds that the Proposed Rule Change is consistent with Section 17A(b)(3)(F) of the Exchange Act.\textsuperscript{57} Section 17A(b)(3)(F) of the Exchange Act requires that the rules of a registered clearing agency must be designed to, among other things, assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible.\textsuperscript{58} As discussed above, NSCC proposes to add three new ways to calculate the volatility component of its Members’ daily margin requirement. The new volatility component calculations, as discussed in detail below, are designed to help NSCC better mitigate the credit risks presented by Member portfolios in a broader range of scenarios and market conditions than NSCC’s current volatility component calculation.

First, as described above, NSCC currently calculates the volatility component of each Member’s Required Deposit using a VaR calculation that relies exclusively on an exponentially-weighted volatility estimation. However, the current VaR calculation places more emphasis on recent market observations, which may result in a swift decline in margin that does not adequately capture the risks related to a rapid decrease in market price volatility levels. To address this shortcoming, NSCC proposes to (1) add a VaR calculation that relies on an evenly-weighted volatility estimation (i.e., that gives equal weight to all historical volatility observations during a specified look-back period), (2) compare the amounts of both VaR calculations (i.e., based on both evenly- and exponentially-weighted volatility estimations), and (3) use the greater amount as the Core Parametric Estimation. Accordingly, the Commission believes adding the VaR calculation based on an evenly-weighted volatility estimation would enable NSCC to more effectively limit its credit exposure to Members in market conditions that reflect a rapid decrease in market price volatility levels.

Second, as described above, when a Member’s portfolio holds a concentrated position in a specific security beyond a significant percentage of the entire portfolio’s value, the portfolio may be more susceptible to Gap Risk Events. In such a scenario, NSCC’s current volatility component calculation may result in inadequate margin coverage. To address this issue, NSCC has proposed the Gap Risk Measure as an alternative volatility component calculation. The Gap Risk Measure is designed to provide better margin coverage in such a scenario as it would apply to all individual equities (including non-index-based and narrow-index-based ETPs, as described above) when a Member maintains a position in its portfolio that exceeds the 30 percent concentration threshold. Accordingly, the Commission believes adding the Gap Risk Measure would enable NSCC to more effectively limit its credit exposure to Members in certain scenarios in which a Member holds a security that meets the 30 percent concentration threshold relative to the remainder of its portfolio.

Third, as described above, when a Member’s portfolio holds either large gross market values or large net directional market values in a period of low market price volatility, NSCC’s current volatility component calculation may not result in adequate margin, which could hinder NSCC’s ability to effectively liquidate or hedge the Member’s portfolio in the event of the Member’s default. To address this concern, NSCC proposes the Portfolio Margin Floor, which would operate as a floor to (i.e., minimum amount of) the volatility component of a Member’s Required Deposit. Accordingly, the Commission believes adding the Portfolio Margin Floor would enable NSCC to more effectively limit its credit exposure to Members in certain scenarios, such as when a Member’s portfolio holds either large gross market values or large net directional market values and market prices exhibit low volatility.

Finally, to help ensure that the amount of margin that NSCC collects as the volatility component of a Member’s Required Deposit would help mitigate each of the specific concerns addressed by the Core Parametric Estimation, Gap Risk Measure, and Portfolio Margin Floor, NSCC would assess the largest amount of those three calculations as the volatility component of the Member’s Required Deposit. In addition to the three proposed volatility component calculations, NSCC also proposes to eliminate the MMD Charge. As described above, NSCC has found the MMD Charge to be an inefficient and ineffective component of the Clearing Fund formula that may not accurately capture the credit risk presented by a Member’s portfolio. More specifically, the charge does not cover a range of scenarios and market conditions that would be covered by the proposed Gap Risk Measure. Moreover, in contrast to the proposed Gap Risk Measure, the MMD Charge (1) only applies to positions in certain securities, (2) does not address concentration risk presented by positions in securities that are not listed on NASDAQ, (3) does not account for concentration in market capitalization categories, and (4) only applies to Market Makers. Accordingly, NSCC’s proposal to eliminate the MMD Charge is designed to remove an obsolete component from the Clearing Fund formula.

Taken together, each of the above described changes would enhance NSCC’s current method for calculating each Member’s volatility component, enabling NSCC to produce margin levels more commensurate with the risks associated with its Members’ portfolios in a broader range of scenarios and market conditions, and, thus, more
effectively cover its credit exposure to its Members. By better limiting NSCC’s credit exposure to its Members, the Proposed Rule Change is designed to help ensure that, in the event of a Member default, NSCC’s operations would not be disrupted and non-defaulting Members would not be exposed to losses that they cannot anticipate or control. In this way, the Proposed Rule Change is designed to help assure the safeguarding of securities and funds which are in the custody or control of NSCC or for which it is responsible, consistent with Section 17A(b)(3)(F) of the Exchange Act.\textsuperscript{59}

B. Consistency with Rule 17Ad–22(e)(4)(i) of the Exchange Act

The Commission believes that the changes proposed in the Proposed Rule Change are consistent with Rule 17Ad–22(e)(4)(i) under the Exchange Act, which requires that NSCC establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposure 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.\textsuperscript{60} Furthermore, the Commission believes that the changes proposed in the Proposed Rule Change are consistent with Rule 17Ad–22(e)(6)(i) under the Exchange Act, which requires that NSCC 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 considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.\textsuperscript{61}

C. Consistency With Rule 17Ad–22(e)(6)(ii) and (v) of the Exchange Act

The Commission believes that the changes proposed in the Proposed Rule Change are consistent with Rule 17Ad–22(e)(6)(ii) under the Exchange Act, which requires that NSCC 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 considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.\textsuperscript{62} Furthermore, the Commission believes that the changes proposed in the Proposed Rule Change are consistent with Rule 17Ad–22(e)(6)(v) under the Exchange Act, which requires that NSCC establish, implement, maintain and enforce written policies and procedures reasonably designed to use an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products.\textsuperscript{63}

As described above, the Commission believes the proposed VaR calculation based on an evenly-weighted volatility estimation would enable NSCC to better manage its credit exposure to Members in market conditions that reflect a rapid decrease in market price volatility levels; the proposed Gap Risk Measure would enable NSCC to better manage its credit exposure to Member portfolios that are more susceptible to Gap Risk Events; and the proposed Portfolio Margin Floor would enable NSCC to better manage its credit exposure to Members in certain scenarios, such as when a Member’s portfolio holds either large gross market values or large net directional market values and market prices exhibit low volatility. Furthermore, NSCC would assess a Member the largest of these three calculations as the Member’s volatility component to its Required Deposit.

Each of these proposed changes is designed to help NSCC more effectively identify, measure, monitor, and manage its credit exposures to its Members. In doing so, the proposed changes would enable NSCC to more accurately assess the volatility component of a Member’s Required Deposit and, thus, help NSCC maintain sufficient financial resources to cover its credit exposure to each Member fully with a high degree of confidence. Therefore, the Commission finds that the changes proposed in the Proposed Rule Change are consistent with Rule 17Ad–22(e)(4)(i) under the Exchange Act.\textsuperscript{64}

C. Consistency With Rule 17Ad–22(e)(6)(ii) and (v) of the Exchange Act

The Commission believes that the changes proposed in the Proposed Rule Change are consistent with Rule 17Ad–22(e)(6)(ii) under the Exchange Act, which requires that NSCC 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 considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.\textsuperscript{65} Furthermore, the Commission believes that the changes proposed in the Proposed Rule Change are consistent with Rule 17Ad–22(e)(6)(v) under the Exchange Act, which requires that NSCC establish, implement, maintain and enforce written policies and procedures reasonably designed to use an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products.\textsuperscript{66}

As described above, the Commission believes the proposed VaR calculation based on an evenly-weighted volatility estimation would enable NSCC to better manage its credit exposure to Members in market conditions that reflect a rapid decrease in market price volatility levels; the proposed Gap Risk Measure would enable NSCC to better manage its credit exposure to Members in certain market conditions with a rapid decrease in market price volatility levels; the proposed Gap Risk Measure would enable NSCC to better manage its credit exposure to Members in certain market conditions with a rapid decrease in market price volatility levels; the proposed Gap Risk Measure would enable NSCC to better manage its credit exposure to Member portfolios that are more susceptible to Gap Risk Events; and the proposed Portfolio Margin Floor would enable NSCC to better manage its credit exposure to Members in certain scenarios, such as when a Member’s portfolio holds either large gross market values or large net directional market values and market prices exhibit low volatility. Moreover, NSCC would assess a Member the largest of these three calculations as the Member’s volatility component to its Required Deposit.

These three proposed volatility component calculations are designed to help improve NSCC’s risk-based margin system by enabling NSCC to produce margin levels that are more commensurate with the risks and particular attributes of the relevant products, portfolios, and markets that NSCC serves. Additionally, as described above, the three proposed volatility component calculations are designed to use methods that are more appropriately tailored for measuring credit exposure that accounts for specific risk factors and portfolio effects. Therefore, the Commission finds that the changes proposed in the Proposed Rule Change are consistent with Rules 17Ad–22(e)(6)(i) and (v) under the Exchange Act.\textsuperscript{67}

III. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change, as modified by Amendment No. 1, is consistent with the Exchange Act. Comments may be submitted by any of the following methods:

Electronically Filed Comments

- Use the Commission’s internet comment form (http://www.sec.gov/rules/sro.shtml); or
- Send an email to rule-comments@sec.gov. Please include File Number SR–NSCC–2017–020 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090. All submissions should refer to File Number SR–NSCC–2017–020. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission’s internet website (http://www.sec.gov/rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission’s Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the

\textsuperscript{59} Id.
\textsuperscript{60} 17 CFR 240.17Ad–22(e)(4)(i).
\textsuperscript{61} 17 CFR 240.17Ad–22(e)(4)(i).
\textsuperscript{62} 17 CFR 240.17Ad–22(e)(6)(i).\textsuperscript{63} 17 CFR 240.17Ad–22(e)(6)(v).
\textsuperscript{64} 17 CFR 240.17Ad–22(e)(6)(i) and (v).
IV. Accelerated Approval of Proposed Rule Change, as Modified by Amendment No. 1

The Commission finds good cause to approve the proposed rule change, as modified by Amendment No. 1, prior to the thirtieth day after the date of publication of the notice of Amendment No. 1 in the Federal Register. As discussed above, NSCC submitted Amendment No. 1 to replace in its entirety the originally filed confidential Exhibit 3a with a new confidential Exhibit 3a in order to remove references to a practice that was not intended for consideration as part of the filing. The Commission believes that Amendment No. 1 does not raise any novel issues or alter the proposed changes in any way. In addition, the Commission finds that the proposed rule change, as modified by Amendment No. 1, is consistent with the Exchange Act and applicable rules thereunder for the reasons discussed above. Accordingly, the Commission finds good cause to approve the proposed rule change, as modified by Amendment No. 1, on an accelerated basis, pursuant to Section 19(b)(2) of the Exchange Act.65

V. Conclusion

On the basis of the foregoing, the Commission finds that the proposed rule change, as modified by Amendment No. 1, is consistent with the requirements of the Exchange Act, in particular, with the requirements of Section 17A of the Exchange Act and the rules and regulations thereunder. It is therefore ordered, pursuant to Section 19(b)(2) of the Exchange Act, that proposed rule change SR–NSCC–2017–020, as modified by Amendment No. 1, be, and it hereby is, approved on an accelerated basis.

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

1. Purpose

The purpose of the proposed change is to update Rule 4758 to reflect the name change of NYSE MKT to NYSE American. Rule 4758 concerns order routing and paragraph (1)(A) thereunder provides various routing options market participants may choose for their orders. The DOT, DOTI, and LIST routing options allow a market participant to route its orders to NYSE MKT. Effective on July 24, 2017, NYSE MKT was renamed NYSE American. Accordingly, the Exchange is proposing to make a technical change to Rule 4758 to reflect the new name of NYSE MKT—NYSE American.

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act in general, and furthers the objectives of Section 6(b)(5) of the Act in particular, in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest, by avoiding market participant confusion that may be caused by having an inaccurate national securities exchange name referenced in the Exchange’s rulebook.

B. Self-Regulatory Organization’s Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition.