



NATIONAL
SECURITIES
CLEARING
CORPORATION

RULES & PROCEDURES

TEXT OF PROPOSED RULE CHANGE

Bold and underlined text indicates proposed added language.

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

PROCEDURE XV. CLEARING FUND FORMULA AND OTHER MATTERS¹

I.(A) Clearing Fund Formula for Members

(1) For CNS Transactions

(a)(i) The volatility of such Member's net of unsettled Regular Way, When-Issued and When-Distributed pending positions (i.e., net positions that have not yet passed Settlement Date) and fail positions (i.e., net positions that did not settle on Settlement Date), hereinafter collectively referred to as Net Unsettled Positions, **which shall be the highest resultant value among the following:**

I. an estimation of volatility calculated ~~Such calculation 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, provided, however, that not less than two standard deviations' volatility shall be calculated under any model chosen. Such calculation shall be made utilizing **(1)** such assumptions and based on such historical data as the Corporation deems reasonable and shall cover such range of historical volatility as the Corporation from time to time deems appropriate; **and (2) each of the following estimations:**

A. an exponentially-weighted moving average volatility estimation using a decay factor of less than 1, and

B. an evenly-weighted volatility estimation using a look-back period of not less than 253 days.

The higher of the two estimations described in (A) and (B) above, shall be the "Core Parametric Estimation".

II. if the absolute value of the largest non-index position in the portfolio represents more than 30 percent of the value of the entire portfolio (the "concentration threshold"), an amount determined by multiplying the gross market value of such position by a percentage designated by the Corporation, which percentage shall be not less than 10 percent. Such percentage shall be determined by selecting the largest of the 1st and 99th percentiles of three-day returns of a

¹ All calculations shall be performed daily or, if the Corporation deems it appropriate, on a more frequent basis.

composite set of equities, using a look-back period of not less than 10 years that includes a one-year stress period,² and then rounding the result up to the nearest whole percentage.

The concentration threshold would be no more than 30 percent, and would be determined by the Corporation from time to time and calibrated based on the portfolio's backtesting results during a time period of not less than the previous 12 months.

III. the sum of:

- A. the net directional market value of the portfolio, which shall be the absolute difference between the market value of the long positions and the short positions in the portfolio, multiplied by a percentage; such percentage shall be determined by the Corporation based on a percentile of the annual historical volatility levels of relevant equity indices (which shall be no less than the historical minimum volatility of the indices), as determined by the Corporation from time to time; and**
- B. the balanced market value of the portfolio, which shall be the lowest corresponding market value of long positions and short positions in the portfolio, multiplied by a percentage; such percentage shall be a fraction of the percentage used in (A) above, determined by the Corporation from time to time by considering the model backtesting performance of the applicable balanced portfolios.**

plus

(b) The net of each day's difference between (x) the contract price of such Member's Regular Way, When-Issued and When-Distributed net positions for transactions not submitted through the ID Net service that have not yet passed Settlement Date and its fail positions, and (y) the Current Market Price for such positions²³ (such difference to be known as the "Regular Mark-to-Market"); provided that: (i) the Corporation shall exclude from this calculation any trades for which the Corporation has, under a Clearing Agency Cross-Guaranty Agreement, either obtained coverage for such difference (if the sum of the differences for the trades subject to the agreement is a positive number) or undertaken an obligation

² **If the one-year stress period overlaps with the ten-year look-back, only the non-overlapping period will be combined with the look-back window.**

²³ For fail positions, the contract price used for this purpose is the prior day's Market Price.

to provide coverage for such difference (if the sum of the differences for trades subject to the agreement is a negative number), (ii) the Corporation may, but shall not be required to, exclude from this calculation any shares delivered by the Member in the night cycle to satisfy all or any portion of a short position, and (iii) that if the Member is an ID Net Subscriber and if the value of the Regular Mark-to-Market as computed above is a positive number, then the value of the Regular Mark-to-Market shall be zero;

plus

(c) If such Member is an ID Net Subscriber, the net of each day's difference between (x) the contract price of the net positions attributable to such Member's transactions submitted through the ID Net service, and (y) the Current Market Price for such positions (such difference to be known as the "ID Net Mark-to-Market"), provided that if the value of the ID Net Mark-to-Market as computed above is a positive number, then the value of the ID Net Mark-to-Market shall be zero.

plus

~~(d) If such Member clears for one or more Market Makers⁴ (i.e., the Member's Correspondent(s)) or is itself a Market Maker in any security dominated by either the Member or its Correspondent(s) (where domination is calculated for each Member and each of its Correspondent(s) according to criteria determined by the Corporation from time to time), and if the sum of the absolute values of the Net Unsettled Positions in such dominated security or securities of any one or more of such Market Makers exceeds the excess net capital of the respective Market Maker or the Member (whether or not it is a Market Maker), (i.e., such Market Maker's or Member's Excess), the Corporation may then require the Member to contribute an additional Clearing Fund Deposit to the Corporation (the "Market Maker Domination Charge") either in an amount equal to each such Market Maker's or Member's Excess or the sum of each of the absolute values of the Net Unsettled Positions or a combination of both. In addition, where a Market Maker's Net Unsettled Positions in dominated issues are cleared by one or more Members, the Corporation may treat those positions, for purposes of calculations pursuant to this paragraph, as if they were all cleared by the Market Maker's clearing Member, as listed~~

⁴ ~~As used in this Procedure, the term "Market Maker" shall mean a member firm of the Financial Industry Regulatory Authority, Inc. (FINRA) that is registered by the FINRA as a Market Maker.~~

~~in the records of the Corporation in accordance with Section 3(e) of Rule 3⁵;~~

plus

~~(ed)~~ An additional payment (“special charge”) from Members in view of price fluctuations in or volatility or lack of liquidity of any security. The Corporation shall make any such determination based on such factors as the Corporation determines to be appropriate from time to time;

plus

~~(fe)~~ 5% or such greater amount, as determined by the Corporation, not to exceed 10% of such Member’s long fail CNS positions plus 5%, or such greater amount, as determined by the Corporation, not to exceed 10% of such Member’s short fail CNS positions;

plus

~~(gf)~~ a margin requirement differential component charge calculated as the sum of the exponentially weighted moving average (“EWMA”) of the daily positive changes over a 100-day look back period in the Member’s (i) Regular Mark-to-Market component, (ii) ID Net Mark-to-Market component and (iii) volatility component, times a multiplier calibrated based on backtesting results;

plus

~~(hg)~~ a coverage component charge calculated as the EWMA of the Member’s daily backtesting coverage deficiency amount over a 100-day look back period; the Member’s backtesting deficiency amount for each day is determined as the difference between the simulated profit and loss on the Member’s portfolio and the sum of the Member’s (i) volatility component, (ii) margin requirement differential component, ~~and~~ (iii) Illiquid Charge ~~and (iv) Market Maker domination charge~~.

plus

~~(ih)~~ For Illiquid Positions, an amount (“Illiquid Charge”) equal to:

- (1) for buy positions in sub-penny Illiquid Securities, the aggregate shares in such positions multiplied by \$0.01, or
- (2) for sell positions,

⁵ ~~The Corporation may require or permit such Member to deliver some or all shares necessary to complete a short obligation in lieu of part or all of its requirement under this section or subsection 1.(A)(2)(c).~~

(a) if the position has a Current Market Price equal to or below \$1.00, the product of the aggregate quantity of Illiquid Securities in the position and either (i) the One Month High Price, or (ii) the Current Market Price of the Illiquid Securities in the position multiplied by a factor of between 2 and 10, based on the minimum share price, which shall not be less than \$0.01; and

(b) if the position has a Current Market Price that is greater than \$1.00, the product of the aggregate quantity of Illiquid Securities in the position and either (i) the One Month High Price, or (ii) the Current Market Price of the Illiquid Securities in the position rounded up to the next \$0.50.

For purposes of (2)(a) and (b) above, in determining whether to use the One Month High Price or the Current Market Price of the Illiquid Securities in the Illiquid Position,

(A) if the share quantity in the Illiquid Position is less than 100 percent and greater than or equal to 25 percent of the average daily volume ("ADV"), the calculation shall use the lesser of the One Month High Price or the Current Market Price of the Illiquid Securities (rounded up to the next \$0.50, if applicable); and

(B) if the share quantity in the Illiquid Position is greater than or equal to 100 percent of the ADV, the calculation shall use the greater of the One Month High Price or the Current Market Price of the Illiquid Securities (rounded up to the next \$0.50, if applicable).

~~The Corporation shall apply the greater of the Illiquid Charge or the Market Maker Domination Charge if it determines that the Illiquid Position is subject to both charges.~~ Members that are not rated by the credit risk matrix are not subject to the Illiquid Charge.

(2) For Balance Order Transactions

(a)(i) The volatility of such Member's net of unsettled Regular Way, When-Issued and When-Distributed positions that have not yet passed Settlement Date, hereinafter collectively referred to as Net Balance Order Unsettled Positions, **which shall be the highest resultant value among the following:**

I. an estimation of volatility calculated ~~Such calculation 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, provided, however, that not less than two standard deviations' volatility shall be calculated under any model chosen. Such calculation

shall be made utilizing **(1)** such assumptions and based on such historical data as the Corporation deems reasonable and shall cover such range of historical volatility as the Corporation from time to time deems appropriate; **and (2) each of the following estimations:**

- A. an exponentially-weighted moving average volatility estimation using a decay factor of less than 1, and**
- B. an evenly-weighted volatility estimation using a look-back period of not less than 253 days.**

The higher of the two estimations described in (A) and (B) above, shall be the “Core Parametric Estimation”.

II. if the absolute value of the largest non-index position in the portfolio represents more than 30 percent of the value of the entire portfolio (the “concentration threshold”), an amount determined by multiplying the gross market value of such position by a percentage designated by the Corporation, which percentage shall be not less than 10 percent. Such percentage shall be determined by selecting the largest of the 1st and 99th percentiles of three-day returns of a composite set of equities, using a look-back period of not less than 10 years that includes a one-year stress period,⁶ and then rounding the result up to the nearest whole percentage.

The concentration threshold would be no more than 30 percent, and would be determined by the Corporation from time to time and calibrated based on the portfolio’s backtesting results during a time period of not less than the previous 12 months.

III. the sum of:

- A. the net directional market value of the portfolio, which shall be the absolute difference between the market value of the long positions and the short positions in the portfolio, multiplied by a percentage; such percentage shall be determined by the Corporation based on a percentile of the annual historical volatility levels of relevant equity indices (which shall be no less than the historical minimum volatility of the indices), as determined by the Corporation from time to time; and**

⁶ **If the one-year stress period overlaps with the ten-year look-back, only the non-overlapping period will be combined with the look-back window.**

B. the balanced market value of the portfolio, which shall be the lowest corresponding market value of long positions and short positions in the portfolio, multiplied by a percentage; such percentage shall be a fraction of the percentage used in (A) above, determined by the Corporation from time to time by considering the model backtesting performance of the applicable balanced portfolios.

plus

(b) The net of each day's difference between the contract price of such Member's Net Balance Order Unsettled Positions, and the Current Market Price for such positions;

plus

~~(c) If such Member clears for one or more Market Makers (i.e., the Member's Correspondent(s)) or is itself a Market Maker in any security dominated by either the Member or its Correspondent(s) (where domination is calculated for each Member and each of its Correspondent(s) according to criteria determined by the Corporation from time to time), and if the sum of the absolute values of the Net Balance Order Unsettled Positions in such dominated security or securities of any one or more of such Market Makers exceeds the excess net capital of the respective Market Maker or the Member (whether or not it is a Market Maker), (i.e., such Market Maker's or Member's Excess), the Corporation may then require the Member to contribute the Market Maker Domination Charge either in an amount equal to each such Market Maker's or Member's Excess or the sum of each of the absolute values of the Net Balance Order Unsettled Positions or a combination of both. In addition, where a Market Maker's Net Balance Order Unsettled Positions in dominated issues are cleared by one or more Members, the Corporation may treat those positions, for purposes of calculations pursuant to this paragraph, as if they were all cleared by the Market Maker's clearing Member, as listed in the records of the Corporation in accordance with Section 3(e) of Rule 3;~~

plus

(dc) An additional payment ("special charge") from Members in view of price fluctuations in or volatility or lack of liquidity of any security. The Corporation shall make any such determination based on such factors as the Corporation determines to be appropriate from time to time;

plus

(~~ed~~) a margin requirement differential component charge calculated as the sum of the EWMA of the daily positive changes over a 100-day look back period in the Member's (i) Regular Mark-to-Market component and (ii) volatility component, times a multiplier calibrated based on backtesting results;

plus

(~~fe~~) a coverage component charge calculated as the EWMA of the Member's daily backtesting coverage deficiency amount over a 100-day look back period; the Member's backtesting deficiency amount for each day is determined as the difference between the simulated profit and loss on the Member's portfolio and the sum of the Member's (i) volatility component, (ii) margin requirement differential component; and (iii) Illiquid Charge ~~and (iv) Market Maker domination charge~~.

plus

(~~gf~~) For Illiquid Positions, an Illiquid Charge equal to:

- (1) for buy positions in sub-penny Illiquid Securities, the aggregate shares in such positions multiplied by \$0.01, or
- (2) for sell positions,
 - (a) if the position has a Current Market Price equal to or below \$1.00, the product of the aggregate quantity of Illiquid Securities in the position and either (i) the One Month High Price, or (ii) the Current Market Price of the Illiquid Securities in the position multiplied by a factor of between 2 and 10, based on the minimum share price, which shall not be less than \$0.01; and
 - (b) if the position has a Current Market Price that is greater than \$1.00, the product of the aggregate quantity of Illiquid Securities in the position and either (i) the One Month High Price, or (ii) the Current Market Price of the Illiquid Securities in the position rounded up to the next \$0.50.

For purposes of (2)(a) and (b) above, in determining whether to use the One Month High Price or the Current Market Price of the Illiquid Securities in the Illiquid Position,

- (A) if the share quantity in the Illiquid Position is less than 100 percent and greater than or equal to 25 percent of

the ADV, the calculation shall use the lesser of the One Month High Price or the Current Market Price of the Illiquid Securities (rounded up to the next \$0.50, if applicable); and

(B) if the share quantity in the Illiquid Position is greater than or equal to 100 percent of the ADV, the calculation shall use the greater of the One Month High Price or the Current Market Price of the Illiquid Securities (rounded up to the next \$0.50, if applicable).

~~The Corporation shall apply the greater of the Illiquid Charge or the Market Maker Domination Charge if it determines that the Illiquid Position is subject to both charges.~~ Members that are not rated by the credit risk matrix are not subject to the Illiquid Charge.

I.(B) Additional Clearing Fund Formula

(2) Excess Capital Premium

If a Member's contribution to the Clearing Fund, as computed pursuant to Section I.(A) of this Procedure (but excluding any charges as set forth in Subsections I.(A)(1)(d), ~~(e)~~, ~~(gf)~~ and ~~(hg)~~, and I.(A)(2)(c), (d), ~~and~~ (e) ~~and~~ ~~(f)~~ of this Procedure), plus any amount collected pursuant to 1.(B)(1) above or Rule 15 (such aggregate amount referred to as the "Calculated Amount"), when divided by its excess net capital or capital (as applicable), as defined in the membership standards set forth in Addendum B, is greater than 1.0 (the "Excess Capital Ratio"), then the Corporation may require such Member to deposit, within such timeframe as the Corporation may require, an additional amount (the "Excess Capital Premium") to the Clearing Fund equal to the product of: (a) the amount by which the Calculated Amount exceeds its excess net capital or capital (as applicable), as defined in the membership standards set forth in Addendum B, multiplied by (b) its Excess Capital Ratio.