



FOIA CONFIDENTIAL TREATMENT REQUESTED

September 1, 2021

VIA CFTC PORTAL

Mr. Christopher Kirkpatrick
Secretary of the Commission
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW
Washington, DC 20581

Re: Amendment to ICE Clear U.S., Inc. Rules - Voluntary Submission Pursuant to Section 5c(c)(1) of the Commodity Exchange Act and the Commodity Futures Trading Commission Regulation 40.5(a)

Dear Mr. Kirkpatrick:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended (the "CEA"), and Commodity Futures Trading Commission ("Commission") Regulation 40.5(a), ICE Clear U.S., Inc. ("ICUS") is submitting this request for Commission approval of changes to the ICUS Rules,¹ specifically the ICUS Risk Management Framework, in order to implement a new initial margin model, ICE Risk Model 2.0. These amendments are to become effective no earlier than the first business day following the forty-fifth calendar day after this submission, or such later date as ICUS and/or the Commission may determine. ICUS has respectfully requested confidential treatment for these amendments to the Risk Management Framework which were submitted concurrently with this submission.

1. Introduction and Key Features of ICE Risk Model 2.0

ICE Risk Model 2.0 ("IRM 2.0") will replace the existing ICE Risk Model 1.0 ("IRM 1.0") for ICUS's cleared futures contracts that reference equity indices. IRM 1.0 will continue to apply to ICUS's other contracts. IRM 2.0 is designed around the following core features:

Portfolio Margining: IRM 2.0 establishes Initial Margin requirements based on the portfolio-level risk. In doing so, it takes into account a portfolio's diversification by analyzing the historical performance of the entire portfolio.

Filtered Historical Simulation Value-at-Risk: IRM 2.0 utilizes a Filtered Historical Simulation Value-at-Risk ("Filtered HVaR") methodology. The Filtered HVaR methodology de-volatizes

¹ Capitalized terms used and not defined in this submission have the meaning set forth in the ICUS Rules.



historical price returns and, in doing so, removes volatility trends existing at a given time and then re-volatilizes (or scales) the time series using current market conditions.

By design, IRM 2.0 conservatively and dynamically calculates Initial Margin requirements in order to address and account for the risks presented by different market environments. The Filtered HVaR methodology ensures that IRM 2.0 establishes with a high degree of certainty (99%) that the losses resulting from adverse market price movements, over a given holding period (1-day for customer origin, 2-days for house origin), for each portfolio of equity index derivatives, will not exceed the Initial Margin requirement established by IRM 2.0.

Anti-Procyclicality: Importantly, IRM 2.0 also incorporates a number of anti-procyclicality measures, specifically:

The Lambda parameter (discussed in more detail below) manages the reactivity of the Initial Margin requirement to sudden and extreme price movements.

In addition, as part of its design, IRM 2.0 mitigates against volatility jumps that typically follow a period of historically low volatility by utilizing: (i) a hard volatility floor; (ii) a soft volatility floor; and (iii) a stress volatility component, as discussed in further detail below.

IRM 2.0's third anti-procyclicality measure is achieved by utilizing a 25% buffer based on the current exponentially weighted moving average ("EWMA") estimated volatility. Significantly, by design, IRM 2.0 does not maintain this 25% buffer as an add-on during times of stress. To enhance the sensitivity of the model and its ability to respond appropriately to market conditions, the buffer is calibrated using a multiplier which equals 1 when volatility is lower than the 50% percentile of historical EWMA volatility, and equals 0 when the volatility is at the maximum historical level, and it is interpolated linearly in between. This multiplier allows for the reduction of the anti-procyclicality stress component of the model in periods of stress as opposed to maintaining the buffer as a procyclical add-on at all times.

Liquidity Risk Charge: IRM 2.0 factors in the liquidity risk of closing out positions in a portfolio during a Clearing Member default by applying both a concentration risk charge and a bid-ask spread charge.

Operational Efficiency: IRM 2.0's portfolio level margining does not require specific pairwise offset parameters that must be defined at the product level and, as a result, efficiently and effectively replaces many individual scanning rates, as well as inter-commodity and inter-month spreads, that are required to be maintained under IRM 1.0. This results in a more streamlined and efficient process from an operational perspective.

2. Detailed Overview of the IRM 2.0 Margin Methodology and Features

First, IRM 2.0 determines the Initial Margin requirement for a given portfolio. This consists of, as more fully described below, a "Base IM" requirement which is supplemented by an additional model component in order to address potential correlation risk. This additional model component



is referred to as the "Correlation Stress Component." The steps involved in this process are detailed in subsection (a), below, Initial Margin Determination.

Second, IRM 2.0 determines a "Liquidity Risk Charge" which has 2 key components. These 2 components and the manner in which the Liquidity Risk Charge is determined are detailed in subsection (b), below, Liquidity Risk Charge Determination. The Liquidity Risk Charge is added to the Initial Margin requirement (Base IM plus any Correlation Stress Component).

Finally, sub-sections (c) and (d), below, describe additional features of IRM 2.0 (respectively, the "Parameter Review Process" and the "Additional Transparency Provided by IRM 2.0 through ICE Portfolio Analytics").

(a) Initial Margin Determination

Initial Margin collateralizes the potential losses that a portfolio could incur when closing-out a defaulting Clearing Member's portfolio (within the required minimum position holding period commonly referred to as the Margin Period of Risk).

In order to determine the appropriate amount of Initial Margin, IRM 2.0 applies relevant risk factors for a given portfolio utilizing relevant historical data and then, as an additional risk mitigating feature, and in order to enhance the sensitivity and accuracy of the model, IRM 2.0 separately normalizes and scales that historical data so that it appropriately factors in current market conditions.

IRM 2.0 can be summarized with the following steps:

Risk Factors: Risk Factors for the purposes of IRM 2.0 are financial factors, estimated daily, that impact the price and returns of futures contracts that reference equity indices. IRM 2.0 will leverage the time series of these Risk Factors to generate plausible scenarios.

Scaling Process: The scaling process is applied to risk factor returns sequentially, thereby generating simulated Risk Factors (also called "Scaled Risk Factors") for every scenario and for every holding period that is in scope. To do so, the scaling process leverages 2 components:

The first component uses a Lambda decay factor in order to normalize the process. ICUS analyzed different Lambdas within a range and established a Lambda that results in appropriate model reactivity, satisfying backtesting results and at the same time mitigating procyclicality. The second component applies estimated volatility forecasts in the re-volatilization utilizing the following factors:

- A hard volatility floor, based on market volatilities of relevant market indices
- A soft volatility cap, defined as the maximum historical EWMA volatility
- A soft volatility floor, defined as a low percentile of historical EWMA volatility
- A stress volatility component, set to a multiple of the largest daily change in volatility observed in historical EWMA volatility, multiplied by an anti-procyclicality factor between 1 and 0



- An anti-procyclicality component, representing 25% of the current EWMA volatility estimated, multiplied by an anti-procyclicality factor between 1 and 0. This component is consistent with the requirements of European Commission Implementing Decision (EU) No 2016/377 of 15 March 2016 on the equivalence of the regulatory framework of the United States of America for central counterparties that are authorized and supervised by the Commodity Futures Trading Commission, and corresponds to option (a) of Article 28 of European Commission Delegated Regulation (EU) No 153/2013, which supplements Regulation (EU) No 648/2012 (as amended, EMIR). These regulations require anti-procyclicality measures in initial margin models in order for a non-EU central counterparty to be recognized by the European Securities and Markets Authority as a "Third Country Central Counterparty."
- The model uses the maximum of the stress volatility component and the anti-procyclicality component, not both.

In short, during periods of relatively low volatility, the normalized risk factors will be scaled up appropriately and result in a more conservative Initial Margin requirement. Consequently, a margin buffer is established during periods of low volatility that will serve to mitigate any Initial Margin increases that might be required in response to sudden and unexpected market volatility.

From these scenarios, IRM 2.0 generates a P&L vector for the relevant portfolio. This portfolio level P&L vector is the basis for estimating the P&L distribution of the entire portfolio over the applicable holding period(s). The Base IM is the 99th percentile of this distribution.

Correlation Stress Component: In determining the Base IM, IRM 2.0 uses a univariate process and it estimates the correlation that was observed historically during the lookback period. As a result, a sudden change in correlation between Risk Factors will not immediately register in the Base IM calculation. In order to mitigate against this risk, IRM 2.0 also determines an add-on to the Base Initial margin requirement that serves as a buffer against potential correlation breaks. This is referred to as the Correlation Stress Component.

(b) Liquidity Risk Charge Determination

The Liquidity Risk Charge is designed to ensure that ICUS collects Initial Margin that will protect against the risk of an adverse financial impact due to relatively large portfolios, as well as any Bid-Ask spread costs, that may be incurred in the process of liquidating positions following a Clearing Member default. The Liquidity Risk Charge captures risk that is not otherwise addressed in the Initial Margin determination described above. As more fully described below, the Liquidity Risk Charge is the sum of two separate charges: a "Concentration Charge" that applies to relatively large portfolios and a "Bid-Ask Charge" that applies to all portfolios.

Concentration Charge: The Concentration Charge estimates the cost of unwinding the concentrated portion of a given portfolio, by making the conservative assumption that only a certain quantity (referred to as the "Concentration Threshold") of positions can be liquidated on a given day without significant market impact. Concentration Thresholds are based on the daily volume and the open interest of a give instrument.



Bid-Ask Charge: The Bid-Ask Charge component captures a different aspect of liquidity risk, based upon the Bid-Ask spread in prices of traded instruments.

(c) Parameter Review Process

ICUS will manage risk by regularly reviewing the model's parameters. Any resulting changes to the parameters will follow ICUS's process which requires review and approval by the ICUS Chief Risk Officer and President, and thereafter, subject to the oversight of the ICUS Risk Committee and the ICUS Board.

(d) Additional Transparency Provided by IRM 2.0 through ICE Portfolio Analytics

Additional transparency is provided to Clearing Members and other market participants through an on-line user interface, ICE Portfolio Analytics ("IPA"). IPA provides position view, margin calculation and analysis, and report generations for both actual and hypothetical portfolios. IPA will assist Clearing Members and other market participants to manage risk with greater precision and to do so in a way that is planned rather than reactive. For example, IPA's functionality will, among other things, provide a "what-if" margin analysis as positions in a portfolio change as well as a breakdown report showing the various margin components (i.e., Base IM, Correlation Stress Component, Concentration Charge, Bid-Ask Charge).

3. Other Matters

As an initial matter, IRM 2.0 has, consistent with CFTC regulations, been independently validated by a qualified, independent, third party model validator. IRM 2.0 will continue to be validated every year, consistent with CFTC regulations. In addition, in creating, designing and planning for the implementation of IRM 2.0, ICUS consulted extensively with Clearing Members in order to get feedback on the features and design of the model. In addition, ICUS management consulted with members of the ICUS Board and Risk Committee, both informally and at formal scheduled meetings. ICUS received no substantive opposing views about the proposed model and the related amendments to the ICUS Risk Management Framework. In summary, there is broad support for IRM 2.0 among the Clearing Members ICUS consulted with. This support is informed by the conservative but flexible nature of the model's design. In response to market participant feedback, ICUS determined to implement a fixed Lambda rather than a daily calibrated Lambda. That decision was approved by the ICUS Board after the ICUS Risk Committee recommended that it do so.

In a formal meeting, the ICUS Risk Committee, pursuant to its Charter, by a unanimous vote of the members present, recommended that the Board approve the Rule amendments that are the subject of this request. Subsequently, the ICUS Board, pursuant to the ICUS By-Laws, in a formal meeting, by a unanimous vote of all members, approved these proposed Rule amendments.

4. Compliance with the Act and Regulations

ICUS reviewed the foregoing amendments and determined that they comply with the requirements of the Act and the rules and regulations promulgated by the Commission in implementing the Act. In this regard, ICUS reviewed the derivatives clearing organizations core principles ("Core Principles") and determined that the amendments are potentially relevant to the following core principle and the applicable regulations of the Commission thereunder:



Financial Resources (Core Principle B): The implementation of IRM 2.0 will not change the fact that, on an on-going basis, ICUS maintains financial resources sufficient to enable it to meet its financial obligations to its Clearing Members notwithstanding a default by the two Clearing Members creating the largest combined financial exposure to ICUS in extreme but plausible market conditions. ICUS maintains such financial resources through its default resources, which include the initial margin requirement posted by the defaulting Clearing Member(s), the ICUS and ICE Futures U.S., Inc. combined contribution of more than USD68 million in skin-in-the-game, Clearing Member default insurance, and the Guaranty Fund. In addition, ICUS shall continue to perform stress tests, on at least a monthly basis, that will allow it to make a reasonable calculation of the financial resources needed in order to meet the requirements of applicable CFTC regulations. Implementing IRM 2.0 will not result in changes to the methodology used by ICUS to determine its target Guaranty Fund size. Similarly, ICUS will continue to calculate its 2 largest Clearing Member exposures as it has been doing, in a manner consistent with applicable CFTC regulations, as such IRM 2.0 and the Risk Management Framework amendments implementing it are consistent with the requirements of Core Principle B and Commission Regulations 39.11 and 39.33.

Risk Management (Core Principle D): IRM 2.0, like IRM 1.0, will establish initial margin requirements that are commensurate with the risks of each relevant product and the portfolio that product is in, including any unusual characteristics of, or risks associated with, particular products or portfolios. IRM 2.0 is risk based, as are the parameters used in IRM 2.0, and the model and the parameters will be reviewed on a regular basis, consistent with existing practices. In addition, IRM 2.0 will generate initial margin requirements sufficient to cover ICUS's potential future exposures to Clearing Members based on price movements pending the close-out of a defaulting Clearing Member's portfolio. In doing so, ICUS uses appropriate minimum liquidation times for the relevant cleared instruments that meet or exceed CFTC requirements. Furthermore, ICUS has determined that the actual coverage of the IRM 2.0 initial margin requirement, along with projected measures of IRM 2.0's performance, will meet an established confidence level of at least 99 percent, based on data from an appropriate historic time period, consistent with applicable CFTC regulations. More broadly, IRM 2.0 will not affect ICUS's risk management program or compliance with applicable CFTC regulations, other than to change the methodology by which the initial margin requirements for the relevant portfolios of products are determined. Thus, by way of example, ICUS will continue to stress test its financial resources as it does currently. In addition, as it is currently doing, ICUS will at least monthly, and more frequently as appropriate, conduct required sensitivity analyses of its margin models to analyze and monitor their performance and overall margin coverage. In doing so, consistent with CFTC regulations, ICUS will review a wide range of parameter settings and assumptions that reflect possible market conditions in order to understand how the level of initial margin coverage might be affected by highly stressed market conditions, thereby ensuring that the parameters and assumptions are appropriate in light of the specific characteristics, considered on a current basis, of particular cleared products and portfolios. Finally, in determining portfolio level risk and associated initial margin requirements, to the extent that IRM 2.0 allows for reductions in initial margin requirements for related positions, the model has an inherent, imbedded conceptual basis (that incorporates, among other things, exhibited statistical correlations between observations of historic prices that were influenced by common external factors) to ensure that the price risks with respect to such positions are significantly and reliably correlated. The foregoing initial margin reductions, and the correlations on which they are based, will be regularly reviewed. As a result,



IRM 2.0 and the Risk Management Framework amendments implementing it are consistent with the requirements of Core Principle D and Commission Regulations 39.13 and 39.36.

System Safeguards (Core Principle I): IRM 2.0 was designed and tested in accordance with ICUS's program of risk analysis and oversight with respect to its operations and automated systems in order to identify and minimize sources of operational risk through the development of appropriate controls and procedures. ICUS has determined that the automated systems that will implement IRM 2.0 are reliable, secure, and have adequate scalable capacity. In addition, ICUS will extensively test IRM 2.0 with Clearing Members, their customers and vendors in a production environment before going live to further determine that it is reliable, secure, and has adequate scalable capacity, as such IRM 2.0 and the Risk Management Framework amendments implementing it are consistent with the requirements of Core Principle I and Commission Regulation 39.18 and 39.34.

Public Information (Core Principle L): As discussed above, IRM 2.0 incorporates an on-line user interface called ICE Portfolio Analytics or IPA. IPA's functionality provides additional transparency to Clearing Members and other market participants by providing position view, margin calculation and analysis, and report generations for both actual and hypothetical portfolios. It will assist Clearing Members and other market participants to manage risk with greater precision and to do so in a way that is planned rather than reactive, enhancing their ability to evaluate accurately the risks and costs associated with using ICUS's services, as such IRM 2.0 and the Risk Management Framework amendments implementing it are consistent with the requirements of Core Principle L and Commission Regulation 39.21.

In summary, ICUS has determined that the amendments to the ICUS Rules that are the subject of this request comply with the Act and the rules and regulations promulgated by the Commission thereunder. As noted above, ICUS is not aware of any substantive opposing views expressed regarding the amendments. Finally, ICUS certifies that, concurrent with this filing, a copy of this submission was posted on ICUS's website, and may be accessed at <https://www.theice.com/clear-us/regulation>.

If you or your staff have any questions or require further information regarding this submission, please do not hesitate to contact the undersigned at (212) 748-3964 or Eamonn.Hahessy@ice.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Eamonn Hahessy", written over a horizontal line.

Eamonn Hahessy
General Counsel and Chief Compliance Officer