Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010
Section 806(e)(1) *
Section 806(e)(2) *
Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934
Section 3C(b)(2) *

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

The proposed change to CDS Clear margin framework is to adapt the ISDA pricer in case of extreme spread curves.

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 * Francois
Title * Chief Compliance Officer
E-mail * francois.faure@lch.com
Telephone * (000) 000-0000

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.

Date 04/04/2017
By Francois Faure
(Title *)

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.
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. A partial amendment shall be clearly identified and marked to show deletions and additions.
Item 1. **Text of Proposed Rule Change**

(a) Banque Centrale de Compensation, which conducts business under the name LCH SA (“LCH SA”), is proposing to amend its CDS margin framework, in order to promote operational efficiency and improve operational risk management, to provide for an approximation-based method to replace the algorithm that is currently used in the event that the International Swaps and Derivatives Association (“ISDA”) standard model for pricing (“ISDA Pricer”) credit default swaps (“CDS”) fails as a result of extreme spread curves, as further described herein. The text of the proposed rule change has been annexed as Exhibit 5. LCH SA has requested confidential treatment of the material submitted as Exhibit 5.

(b) Not applicable.

(c) Not applicable.

Item 2. **Procedure of the Self-Regulatory Organization**

LCH SA has completed all of the required action to be taken to approve the proposed rule change. The proposed rule change was approved by the Executive Risk Committee of LCH on September 20, 2016. No further approvals are necessary.

Questions should be addressed to François Faure, Chief Compliance Officer, at francois.faure@lch.com or +33 1 70 37 65 96; or Mohamed Meziane, Senior Regulatory Advisor, Compliance Department, at mohamed.meziane@lch.com or +33 1 70 37 65 62.

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

(a) **Purpose**
Spread margin is a component in LCH SA’s margin methodology. LCH SA currently uses the ISDA Pricer to calibrate credit spread curves. In the case of “extreme” credit spread curves, however, it is not possible to calibrate credit spread curves using the ISDA Pricer. Currently, in the event that the ISDA Pricer fails, LCH SA uses a dichotomy-based algorithm to adjust the spread input and to perform repeated calibration of the spread curve between two tenors until it identifies (x) the tenor which has caused the calibration to fail and (y) the level of the spread closest to input for the tenor that allows the curve to calibrate. In practice, applying this algorithm is time consuming and may lead to lengthy system processing, because it necessitates repetition of a dichotomy analysis until the tenor that is responsible for the failure is identified. This, in turn, could result in delay in performing LCH SA’s margin calculation. In addition, because the spread curve will be replicated in subsequent simulation runs as part of the spread margin calculation, it is very likely that the calibration failure that occurs when obtaining the mark-to-market price for a CDS contract will also occur in subsequent simulation runs, which means that the dichotomy algorithm would need to be used many times, which accounts for significant processing time in CDSClear’s overnight batch. Therefore, to promote operational efficiency and improve operational risk management while maintaining a sound pricing mechanism, LCH SA is proposing to replace its existing dichotomy-based algorithm with a new approximation-based method to price CDS contracts in the event of extreme spread curves that cause the ISDA Pricer to fail.

Text is added to Section 2.2 “CDS Pricing” in “Reference Guide: CDS Margin Framework” to describe the new approximation-based method, which specifies that in the event the ISDA Pricer fails, LCH SA would use an approximation-based method to
calibrate credit spread curves. The new method consists of three steps: (i) constructing a piecewise constant hazard rate curve, (ii) constructing a piecewise constant interest rate curve, and (iii) defining the average hazard rate and average interest rate over the period considered and applying them to price the CDS using the usual mark-to-market pricing formula in any market conditions, under the assumption of continuous coupon payment.

LCH SA has performed analysis comparing its approximation method to the ISDA Pricer and the results indicate that its approximation method provides a reliable pricing estimate. The proposed rule change would, therefore, simplify LCH SA’s margin methodology and would significantly reduce operational risk while simultaneously providing a sound pricing method for extreme curves.

(b) **Statutory Basis**

LCH SA believes that the proposed rule change is consistent with the requirements of the Securities Exchange Act of 1934 (the “Act”) and the rules and regulations thereunder applicable to LCH SA. Specifically, in accordance with Section 17(A)(b)(3)(F),¹ LCH SA believes that the proposed rule change will promote the prompt and accurate clearance and settlement of securities transactions, derivatives agreements, contracts, and transactions and to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible, in that the proposed rule change is designed to promote operational efficiency and reduce operational risk caused by the existing dichotomy-based algorithm, which is used in the event of extreme spread curves that cause the ISDA Pricer to fail, while maintaining a sound pricing mechanism for LCH SA’s margin calculation. In addition, the proposed

rule change is consistent with the relevant requirements of Rule 17Ad-22(d)(4), which requires a clearing agency to establish and maintain policies and procedures that identify sources of operational risk and to minimize such risk through development of procedures that are reliable;\(^2\) as well as Rule 17Ad-22(e)(17), which requires a covered clearing agency to establish and maintain policies and procedures reasonably designed to manage the covered clearing agency’s operational risks by identifying the plausible sources of operational risk and mitigating their impact through the use of appropriate systems, policies, procedures and controls.\(^3\) LCH SA has identified its current dichotomy-based algorithm as a source of operational risk, based on its observation of the algorithm as an operationally intensive and time consuming practice. LCH SA believes that the new pricing method as described in the proposed rule change is reasonably designed to minimize operational risk and eliminate possible delays existing in the current overnight batch process as a result of the dichotomy-based algorithm in the event of extreme spread curves that cause the ISDA Pricer to fail. In addition, LCH SA has performed analysis comparing its approximation method to the ISDA Pricer and the results indicate that its approximation method provides a reliable pricing estimate. Therefore, LCH SA believes that the proposed rule change is reasonably designed to minimize or mitigate the operational risk identified by LCH SA through the use of appropriate systems and policies, consistent with Rule 17Ad-22(d)(4) and Rule 17Ad-22(e)(17). The proposed rule change is also consistent with Rule 17Ad-22(b)(1) and (2),\(^4\) which require a clearing agency to maintain margin and limit a clearing agency’s exposures to potential losses from

\(^2\) 17 CFR 240.17Ad-22(d)(4).
\(^3\) 17 CFR 240.17Ad-22(e)(17).
\(^4\) 17 CFR 240.17Ad-22(b)(1) - (2).
participants’ defaults under normal market conditions, and Rule 17Ad-22(e)(4),\(^5\) which requires a covered clearing agency to manage credit exposures to participants by maintaining sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. LCH SA has performed analysis to support the new pricing method for extreme spread curves as a reliable pricing tool to use in its margin methodology in the event of extreme spread curves that cause the ISDA Pricer to fail, and, therefore, believes that the proposed rule change would continue to cause LCH SA to maintain margin to cover its credit exposure to, and to limit its exposures to potential losses from, each Clearing Member’s defaults under normal market conditions with a high degree of confidence.

**Item 4. Self-Regulatory Organization’s Statement on Burden on Competition**

Section 17A(b)(3)(I) of the Act requires that the rules of a clearing agency not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.\(^6\) The proposed rule change is part of the spread margin calculation, which will uniformly apply across all participants and, as noted above, is consistent with the applicable requirements of the Act, eliminates operational risk and provides reliable pricing of CDS in the event that the ISDA Pricer fails. Therefore, LCH SA does not believe the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

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

\(^5\) 17 CFR 240.17Ad-22(e)(4).

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

**Item 6. Extension of Time Period for Commission Action**

LCH SA does not consent to the extension of the time period listed in Section 19(b)(2) of the Securities Exchange Act of 1934 for Commission action.

**Item 7. Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2) or Section 19(b)(7)(D)**

(a) Not applicable.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable.

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

The proposed rule change is not based on the rules of another self-regulatory organization or the Commission.

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

Not applicable.

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

Not applicable

**Item 11. Exhibits**

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

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, Banque Centrale de Compensation has caused this filing to be signed on its behalf by the undersigned hereunto duly authorized.

BANQUE CENTRALE DE COMPENSATION

By: ________________________________
Francois Faure
Chief Compliance Officer
EXHIBIT 1A

SECURITIES AND EXCHANGE COMMISSION

(Release No. 34- ; File No. SR-LCH SA-2017-004)

April 4, 2017

Self-Regulatory Organizations; LCH SA; Proposed Rule Change Relating to CDS Margin and Extreme Credit Spread Curves

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”)\(^1\) and Rule 19b-4 thereunder\(^2\) notice is hereby given that on April 4, 2017, Banque Centrale de Compensation, which conducts business under the name LCH SA (“LCH SA”), filed with the Securities and Exchange Commission (“Commission”) the proposed rule change described in Items I, II, and III below, which Items have been prepared primarily by LCH SA. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

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

LCH SA is proposing to amend its CDS margin framework, in order to promote operational efficiency and improve operational risk management, to provide for an approximation-based method to replace the algorithm that is currently used in the event that the International Swaps and Derivatives Association (“ISDA”) standard model for pricing (“ISDA Pricer”) credit default swaps (“CDS”) fails as a result of extreme spread curves, as further described herein.

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

In its filing with the Commission, LCH SA included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. LCH SA has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of these statements.

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

1. Purpose

Spread margin is a component in LCH SA’s margin methodology. LCH SA currently uses the ISDA Pricer to calibrate credit spread curves. In the case of “extreme” credit spread curves, however, it is not possible to calibrate credit spread curves using the ISDA Pricer. Currently, in the event that the ISDA Pricer fails, LCH SA uses a dichotomy-based algorithm to adjust the spread input and to perform repeated calibration of the spread curve between two tenors until it identifies (x) the tenor which has caused the calibration to fail and (y) the level of the spread closest to input for the tenor that allows the curve to calibrate. In practice, applying this algorithm is time consuming and may lead to lengthy system processing, because it necessitates repetition of a dichotomy analysis until the tenor that is responsible for the failure is identified. This, in turn, could result in delay in performing LCH SA’s margin calculation. In addition, because the spread curve will be replicated in subsequent simulation runs as part of the spread margin calculation, it is very likely that the calibration failure that occurs when obtaining the mark-to-market price for a CDS contract will also occur in subsequent simulation runs,
which means that the dichotomy algorithm would need to be used many times, which accounts for significant processing time in CDSClear’s overnight batch. Therefore, to promote operational efficiency and improve operational risk management while maintaining a sound pricing mechanism, LCH SA is proposing to replace its existing dichotomy-based algorithm with a new approximation-based method to price CDS contracts in the event of extreme spread curves that cause the ISDA Pricer to fail.

Text is added to Section 2.2 “CDS Pricing” in “Reference Guide: CDS Margin Framework” to describe the new approximation-based method, which specifies that in the event the ISDA Pricer fails, LCH SA would use an approximation-based method to calibrate credit spread curves. The new method consists of three steps: (i) constructing a piecewise constant hazard rate curve, (ii) constructing a piecewise constant interest rate curve, and (iii) defining the average hazard rate and average interest rate over the period considered and applying them to price the CDS using the usual mark-to-market pricing formula in any market conditions, under the assumption of continuous coupon payment.

LCH SA has performed analysis comparing its approximation method to the ISDA Pricer and the results indicate that its approximation method provides a reliable pricing estimate. The proposed rule change would, therefore, simplify LCH SA’s margin methodology and would significantly reduce operational risk while simultaneously providing a sound pricing method for extreme curves.

2. Statutory Basis

LCH SA believes that the proposed rule change is consistent with the requirements of the Act and the rules and regulations thereunder applicable to LCH SA.
Specifically, in accordance with Section 17(A)(b)(3)(F),³ LCH SA believes that the proposed rule change will promote the prompt and accurate clearance and settlement of securities transactions, derivatives agreements, contracts, and transactions and to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible, in that the proposed rule change is designed to promote operational efficiency and reduce operational risk caused by the existing dichotomy-based algorithm, which is used in the event of extreme spread curves that cause the ISDA Pricer to fail, while maintaining a sound pricing mechanism for LCH SA’s margin calculation. In addition, the proposed rule change is consistent with the relevant requirements of Rule 17Ad-22(d)(4), which requires a clearing agency to establish and maintain policies and procedures that identify sources of operational risk and to minimize such risk through development of procedures that are reliable,⁴ as well as Rule 17Ad-22(e)(17), which requires a covered clearing agency to establish and maintain policies and procedures reasonably designed to manage the covered clearing agency’s operational risks by identifying the plausible sources of operational risk and mitigating their impact through the use of appropriate systems, policies, procedures and controls.⁵

LCH SA has identified its current dichotomy-based algorithm as a source of operational risk, based on its observation of the algorithm as an operationally intensive and time consuming practice. LCH SA believes that the new pricing method as described in the proposed rule change is reasonably designed to minimize operational risk and eliminate possible delays existing in the current overnight batch process as a result of the

⁴ 17 CFR 240.17Ad-22(d)(4).
⁵ 17 CFR 240.17Ad-22(e)(17).
dichotomy-based algorithm in the event of extreme spread curves that cause the ISDA Pricer to fail. In addition, LCH SA has performed analysis comparing its approximation method to the ISDA Pricer and the results indicate that its approximation method provides a reliable pricing estimate. Therefore, LCH SA believes that the proposed rule change is reasonably designed to minimize or mitigate the operational risk identified by LCH SA through the use of appropriate systems and policies, consistent with Rule 17Ad-22(d)(4) and Rule 17Ad-22(e)(17). The proposed rule change is also consistent with Rule 17Ad-22(b)(1) and (2),\(^6\) which require a clearing agency to maintain margin and limit a clearing agency’s exposures to potential losses from participants’ defaults under normal market conditions, and Rule 17Ad-22(e)(4),\(^7\) which requires a covered clearing agency to manage credit exposures to participants by maintaining sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. LCH SA has performed analysis to support the new pricing method for extreme spread curves as a reliable pricing tool to use in its margin methodology in the event of extreme spread curves that cause the ISDA Pricer to fail, and, therefore, believes that the proposed rule change would continue to cause LCH SA to maintain margin to cover its credit exposure to, and to limit its exposures to potential losses, each Clearing Member’s defaults under normal market conditions with a high degree of confidence.

B. Clearing Agency’s Statement on Burden on Competition

Section 17A(b)(3)(I) of the Act requires that the rules of a clearing agency not impose any burden on competition not necessary or appropriate in furtherance of the

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\(^6\) 17 CFR 240.17Ad-22(b)(1) - (2).

\(^7\) 17 CFR 240.17Ad-22(e)(4).
purposes of the Act.\textsuperscript{8} The proposed rule change is part of the spread margin calculation, which will uniformly apply across all participants and, as noted above, is consistent with the applicable requirements of the Act, eliminates operational risk and provides reliable pricing of CDS in the event that the ISDA Pricer fails. Therefore, LCH SA does not believe the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

C. Clearing Agency’s Statement on Comments on the Proposed Rule Change Received from Members, Participants or Others

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

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the Federal Register or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) by order approve or disapprove such proposed rule change, or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

**Electronic Comments:**
- Use the Commission’s Internet comment form (http://www.sec.gov/rules/sro.shtml); or
- Send an e-mail to rule-comments@sec.gov. Please include File Number SR-LCH SA-2017-004 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-LCH SA-2017-004. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission’s Internet website (http://www.sec.gov/rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filings will also be available for inspection and copying at
the principal office of LCH SA and on LCH SA’s website at http://www.lch.com/asset-classes/cdsclear. 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-LCH SA-2017-004 and should be submitted on or before [Commission to insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority. 

Secretary

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Exhibit 5

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