

EXHIBIT 4

Bold and underlined text indicates proposed added language.

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

Bold, underlined, blue highlighted black text represents language proposed to be added by this Amendment No. 1.

~~Bold, strikethrough, blue highlighted black text~~ represents language in the current rule that is now being proposed to be deleted by this Amendment No. 1.

~~Bold, strikethrough, blue highlighted red text~~ represents initially proposed language that is no longer being proposed and is now being deleted by this Amendment No. 1.

**RULES, BY-LAWS AND ORGANIZATION CERTIFICATE OF
THE DEPOSITORY TRUST COMPANY**

RULE 38(A)

SYSTEMS DISCONNECT: THREAT OF SIGNIFICANT IMPACT TO THE CORPORATION'S SYSTEMS PARTICIPANT SYSTEM DISRUPTION

Section 1. **Major Event Definitions**

For purposes of this Rule **38(A)**, the following terms shall have the following meanings:

“Affiliate” means a Person that controls or is controlled by or is under common control with another Person. Control of a Person means the direct or indirect ownership, or power to vote more than 50% of any class of the voting securities or other voting interests of such Person.

“Best Practices” means policies, procedures, practices or similar standards and guidelines that are reasonably designed and consistent with then current financial-sector cybersecurity standards issued by an authoritative body that is a U.S. governmental entity or agency, an association of a U.S. governmental entity or agency, or a widely recognized industry organization.

“DTCC Systems” means the systems, equipment and technology networks of DTCC, the Corporation and/or ~~their~~ **any Affiliates of DTCC or the Corporation**, whether owned, leased, or licensed, **and including** software, **hardware, applications**, devices, IP addresses, or other addresses or accounts used in connection with **such systems, equipment and technology networks, to provide**~~ing~~ the services set forth in ~~these the~~ Rules **and the Procedures**, or **otherwise** used to transact business or ~~to manage the connection connect~~ with **DTCC**, the Corporation, **or any Affiliates of DTCC or the Corporation**.

“DTCC Systems Participant” means ~~(A) any Participant, Limited Participant, or Pledgee, or an Affiliate of any Participant, Limited Participant, or Pledgee, that directly or indirectly connects with DTCC Systems; or (B) any third party service provider, or service bureau, or other similar entity that is directly connecting or indirectly connects with the DTCC Systems on behalf of or for the benefit of any Participant, Limited Participant, Pledgee, or an Affiliate of any Participant, Limited Participant, or Pledgee that connects with DTCC Systems either directly or indirectly via a Third-Party Provider.~~ **(A) any Participant, Limited Participant, or Pledgee, or an Affiliate of any Participant, Limited Participant, or Pledgee, that directly or indirectly connects with DTCC Systems; or (B) any third party service provider, or service bureau, or other similar entity that is directly connecting or indirectly connects with the DTCC Systems on behalf of or for the benefit of any Participant, Limited Participant, Pledgee, or an Affiliate of any Participant, Limited Participant, or Pledgee that connects with DTCC Systems either directly or indirectly via a Third-Party Provider.**

~~“Major Event” means the happening of one or more Systems Disruption(s) that is reasonably likely to have a significant impact on the Corporation’s operations, including the DTCC Systems, that affect the business, operations, safeguarding of securities or funds, or physical functions of the Corporation, Participants and/or other market participants.~~

“Major System Event” means a Participant System Disruption that has or is reasonably anticipated to, for example, disrupt, degrade, cause a delay in, interrupt or otherwise alter the normal operation of DTCC Systems; result in unauthorized access to DTCC Systems; result in the loss of control of, disclosure of, or loss of DTCC Confidential Information; or cause a strain on, loss of, or overall threat to the Corporation’s resources, functions, security or operations.

“Participant System Disruption” means an incident resulting from the ~~actual or reasonably anticipated~~ unintended or unauthorized access to, or ~~unavailability, failure, the malfunction or ,overload, corruption, or restriction~~ (whether partial or total) of one or more systems, of a DTCC Systems Participant or its Third-Party Provider, connected to DTCC Systems.

~~“Systems Disruption” means the unavailability, failure, malfunction, overload, or restriction (whether partial or total) of a DTCC Systems Participant’s systems that disrupts or degrades the normal operation of such DTCC Systems Participant’s systems; or anything that impacts or alters the normal communication, or the files that are received, or information transmitted, to or from the DTCC Systems.~~

“Third-Party Cybersecurity Firm” means a firm that, in the Corporation’s reasonable judgement, (A) (i) is well-known and reputable; (ii) is not ~~affiliated with DTCC, the Corporation, an Affiliate of DTCC or the Corporation, a DTCC Systems Participant, or an Affiliate of a~~ the subject DTCC Systems Participant, or an Affiliate or a Third-Party Provider of the subject DTCC Systems Participant; (iii) ~~specializes~~ is experienced in financial-sector cybersecurity; and (iv) employs Best Practices; or (B) is otherwise determined to be a Third-Party Cybersecurity Firm by the Corporation.

“Third-Party Provider” means an Affiliate of any Member, Limited Member, or Sponsored Member, or a third-party service provider, service bureau or other similar entity, that connects to DTCC Systems on behalf of or for the benefit of a DTCC Systems Participant.

Section 2. ~~Powers of the Corporation~~ *Section 4.* Notifications **of a Participant System Disruption**

(a) ~~Each Participant shall notify the Corporation immediately upon becoming aware of any Major Event and cooperate with the Corporation to identify the root cause and resolution. Any DTCC Systems Participant experiencing a Participant System Disruption shall notify the Corporation of such on behalf of itself and any Affiliate of the DTCC Systems Participant, in writing, immediately, but no later than two hours after experiencing the disruption.~~

(b) ~~The Corporation shall promptly notify the DTCC Systems Participant(s) of any action the Corporation takes or intends to take with respect to such DTCC Systems Participant(s) pursuant to Section 3 of this Rule 38(A). If a DTCC Systems Participant has actual knowledge that an unaffiliated DTCC Systems Participant is experiencing a Participant System Disruption, the DTCC Systems Participant shall, if legally permitted, notify the Corporation of such, in writing, immediately, but no later than two hours after obtaining such knowledge.~~

~~(c)~~ **Notifications** provided pursuant to paragraphs (a) ~~and (b)~~ of this Section 2 shall, at a minimum, include all of the following information, and any such information unconfirmed or otherwise unknown shall be identified by the DTCC Systems Participant as **“Unknown”**:

- (i) *Legal Entities.* A complete list of the legal entity names of the DTCC Systems Participant ~~and any of its Third-Party Providers~~ experiencing or otherwise affected or potentially affected by the Participant System Disruption.
- (ii) *Contact Information.* A list of ~~persons—the subject DTCC Systems Participant—employees—and—authorized agents,~~ — with their corresponding titles, primary email addresses and phone numbers, and, if those primary email addresses and phone numbers are associated with the systems that are the subject of the Participant System Disruption, alternate email addresses and phone numbers ~~that are external to the subject DTCC Systems Participant’s systems,~~ — who are authorized to act on behalf of the subject DTCC Systems Participant regarding the Participant System Disruption.
- (iii) *Participant System Disruption Details.*
 - (1) Event Type – the type of Participant System Disruption, for example, an insider threat, phishing attack, MITM attack, privilege escalation, denial of service, external threat, malware, unauthorized access, ransomware, compromised user account, SQL injections, brute force attack, system compromise, supply chain attacks (as each term is commonly understood by cybersecurity professionals in the financial sector), or other – if other, please explain.
 - (2) Event Effect – perceived, anticipated, or known effect of the Participant System Disruption, for example, loss of communication, data corruption, security breach, or other – if other, please explain.
 - (3) Start Date – date and time when the Participant System Disruption began.
 - (4) End Date – date and time when the Participant System Disruption ended, if applicable.
 - (5) Discovery Date – date and time when the Participant System Disruption was first identified.
 - (6) Scope – scope of the Participant System Disruption ~~for the subject DTCC Systems Participant,~~ including, but not limited to, a list of each affected or likely affected system or data, including DTCC Systems and data, the degree of such affect, and any supporting evidence of such.

- (7) Notices – whether any formal or informal notices or information ~~regarding of the Participant System Disruption or related information was provided to any third party including, but not limited to, a regulator or other supervisory, enforcement, or investigatory body; another DTCC Systems Participant; or a media outlet; was made public~~ and, if so, provide a copy of such notices or ~~relevant information, if legally permitted.~~

Section 3. Declaration of a Major System Event

(a) Upon becoming aware of a Participant System Disruption, the Corporation will consider whether such Participant System Disruption meets the definition of a Major System Event. The existence of a Major System Event shall be declared by two or more members of the Corporation’s senior most management committee, in their reasonable judgment.

(b) ~~The determination that the Corporation has a reasonable basis to conclude that there has been a Major Event and~~Upon declaration of a Major System Event, the Corporation shall be entitled to act (or refrain from acting) ~~as prescribed in Section 3 of pursuant to Section 4 of this Rule 38(A) to help address, correct, mitigate or alleviate any and all risks presented to the Corporation~~ by or related to the Major System Event. Action taken will be in consideration of the risks presented to the Corporation, including, but not limited to, the risks enumerated in the definition of a Major System Event, based on the facts and circumstances, including, but not limited to, information provided pursuant to Section 2 of this Rule 38(A). ~~may be made by either the Chief Executive Officer, the Chief Financial Officer, the Group Chief Risk Officer, the Chief Information Officer, the Head of Clearing Agency Services or the General Counsel (an “Officer Major Event Action”). As soon as practical following such a decision, any management committee on which all of the foregoing officers serve shall convene, and the Corporation shall convene a Board of Directors meeting as soon as practicable thereafter (and in any event within 5 Business Days following such determination), in each case, to ratify, modify or rescind such Officer Major Event Action.~~

(c) Following declaration of a Major System Event, the Corporation shall promptly notify the Board of Directors, members of the Corporation’s senior most management committee that did not declare such Major System Event, and the SEC of such declaration.

(d) The Corporation shall provide the Board of Directors an update on the status of the Major System Event and any action taken pursuant to this Rule 38(A) on the earlier of 45 calendar days from the date of declaration of the Major System Event or the next scheduled Board of Directors meeting, or more frequently following material changes to the status of a Major System Event.

Section 3-4. Authority to ~~Take~~ Take Actions and Required Cooperation

~~Upon the determination that there is a Major Event, the Corporation shall be entitled, during the pendency of such Major Event, to:~~

(a) During or in connection with a Major System Event, the Corporation may:

- (i) ~~(a)~~ disconnect the DTCC Systems Participant's system from all the DTCC Systems any and all connections systems of the subject DTCC Systems Participant;
- (ii) ~~(b)~~ suspend the receipt and/or transmission of files or communications to/from the DTCC Systems Participant to the DTCC Systems any and all transmissions, communications, or access between DTCC Systems and the subject DTCC Systems Participant; or
- (iii) ~~(c)~~ take, or refrain from taking, or require the subject DTCC Systems Participant to take or refrain from taking, any and all action that the Corporation considers appropriate to prevent, help address, correct, mitigate or alleviate the Major System Event and, as appropriate and practical, facilitate the continuation of services as may be practicable, and, in that context, issue which may include issuing instructions to the subject DTCC Systems Participant and requiring such DTCC Systems Participant to act on such instructions.

(b) The Corporation shall promptly notify the subject DTCC Systems Participant of any disconnection, suspension, or other material action the Corporation takes with respect to such DTCC Systems Participant pursuant to this Section 4. Notwithstanding any action taken pursuant to this Section 4, the subject DTCC Systems Participant must continue to meet its obligations to the Corporation and comply with these Rules and the Procedures.

(c) The subject DTCC Systems Participant shall cooperate fully and completely with, and to the reasonable satisfaction of, the Corporation in all matters relating to the Participant System Disruption Major System Event, including, but not limited to, (i) conducting timely investigations and inquiries, as the Corporation believes reasonably necessary, with respect to any known or unknown information relating to the Participant System Disruption; (ii) promptly notifying the Corporation of any material changes, updates, or new information learned regarding the Participant System Disruption; and (iii) to the extent legally permitted, promptly providing any documentation or information requested by the Corporation, unless not legally permitted to do so, regarding or related to the Participant System Disruption.

Section 5. Reconnection Requirements

(a) A DTCC Systems Participant that was the subject of action pursuant to Section 4(a) of this Rule 38(A) must provide to the Corporation the following, prior to the Corporation reestablishing connectivity of the DTCC Systems Participant to DTCC Systems (“Reconnection”):

- (i) a detailed, comprehensive, and auditable report, from a Third-Party Cybersecurity Firm, or summary of such report, that, at minimum, includes:**
 - (1) a timeline of the Participant System Disruption, including all material actions, events, and decisions taken for or relating to the Participant System Disruption;**
 - (2) a description of the Participant System Disruption and an explanation of how such disruption was corrected and resolved;**
 - (3) root cause analysis of the Participant System Disruption;**
 - (4) confirmation that any issues identified by the Third-Party Cybersecurity Firm as severe, critical, or moderate, or comparable categorizations, have been resolved;**
 - (5) confirmation of normal or intended operation of the subject ~~DTCC Systems Participant’s~~ systems, including, but not limited to, the return or replacement of key systems and datastores to pre-Participant System Disruption resilience, in a safe, secure, and proper manner for at least 72 hours;**
 - (6) a description of short- and long-term preventive monitoring and detection recommendations from the Third-Party Cybersecurity Firm; and**
 - (7) any other information reasonably requested to be included by the Corporation.**
- (ii) an attestation from a member of the board of directors, a senior executive officer, or other member of senior management of the subject DTCC Systems Participant (“Participant Officer”) that:**
 - (1) the Third-Party Cybersecurity Firm’s report is, to the best of the Participant Officer’s knowledge, accurate and complete;**
 - (2) all short-term preventive monitoring and detection controls recommended by the Third-Party Cybersecurity Firm have been implemented;**

- (3) all medium- and long-term preventive monitoring and detection controls recommended by the Third-Party Cybersecurity Firm will be promptly implemented;
- (4) the Participant Officer recommends Reconnection to DTCC Systems; and
- (5) the DTCC Systems Participant will continue to oversee the full and complete remediation of any and all open action items regarding the Participant System Disruption, will continue to monitor the ~~DTCC Systems Participant's~~ subject systems, and will immediately, but no later than two hours, notify the Corporation of any evidence that indicates or may indicate the continuation of the Participant System Disruption or the existence of a new Participant System Disruption.

(iii) an executed indemnity to the reasonable satisfaction and judgement of the Corporation in consideration of the facts and circumstances.

(b) In addition to the requirements set forth in paragraph (a) of this Section 5, upon the Corporation's request, the subject DTCC Systems Participant shall promptly provide any missing or additional documentation or information and take, to the Corporation's reasonable satisfaction, any action including, but not limited to, permitting an onsite validation of the subject DTCC Systems Participant by a second Third-Party Cybersecurity Firm.

Section 6. Reconnection Testing and Approval

(a) Prior to any Reconnection pursuant to paragraph (b) of this Section 6, the subject DTCC Systems Participant shall demonstrate, as applicable, to the Corporation's reasonable satisfaction, that it:

- (i) can operate in a test environment, including, but not limited to, sending and receiving messages and transactions;
- (ii) can replay or resubmit previously submitted messages or transactions;
- (iii) can reverse or void previously submitted messages or transactions;
- (iv) can confirm the integrity of messages and transactions;
- (v) has alternative communication methods with the Corporation to facilitate the exchange of messages, transactions, and reports; and
- (vi) can complete any other such requirements as are reasonably requested by the Corporation.

(b) Reconnection of a DTCC Systems Participant shall be approved by two or more members of the Corporation's senior most management committee, in their reasonable judgement, after (1) the Corporation has received all required information, pursuant to Section 5 of this Rule 38(A), in form and substance satisfactory to the Corporation, and (2) the requirements of paragraph (a) of this Section 6 have been satisfied, as applicable.

Section 5-7. Certain Miscellaneous Matters

(a) Without limiting any other provisions in these Rules ~~or the Procedures~~ concerning limitations on liability, ~~neither none of the Corporation, or its Affiliates, nor its or their directors, officers, employees, agents, or contractors shall be liable to any DTCC Systems Participant or any other person (including any third party provider or service bureau acting on behalf of the Participant~~ or any customer or client thereof) for:

- (i) any failure, hindrance, interruption or delay in performance in whole or in part of the obligations of the Corporation under ~~the these~~ Rules or ~~the~~ Procedures, if that failure, hindrance, interruption or delay arises out of or relates to a **Participant System Disruption, Major System Event, or any action or inaction pursuant to this Rule 38(A);** or
- (ii) any loss, liability, damage, cost or expense arising from or relating in any way to any **advice, request, requirement, instruction,** ~~actions taken, or omitted to be taken, inaction~~ pursuant to this Rule 38(A).

(b) The power of the Corporation to take any action pursuant to this Rule 38(A), ~~or to request or require any action, documentation, or information pursuant to this Rule 38(A),~~ also includes the power to **waive,** repeal, rescind, revoke, amend, or vary any such action, ~~request, or requirement in consideration of the facts and circumstances.~~

(c) The powers of the Corporation pursuant to this Rule 38(A) shall be in addition to, and not in ~~derogation~~ **limitation** of, **any** authority granted elsewhere in these Rules ~~or the Procedures~~ to ~~take action~~ **act** as specified therein.

(d) ~~The Participant(s) shall, in accordance with the Rules, maintain the confidentiality of any DTCC Confidential Information provided to them by the Corporation and/or DTCC in connection with a Major Event. All information related to or regarding a Major System Event and all acts pursuant to this Rule 38(A) shall be considered DTCC Confidential Information pursuant to these Rules and the Procedures.~~

(e) ~~In the event of any conflict between the provisions of this Rule 38(A) and any other Rules or Procedures, the provisions of this Rule 38(A) shall prevail. Failure of a DTCC Systems Participant to comply with the requirements of this Rule 38(A) may subject the DTCC Systems Participant that (A) is a Participant, Limited Participant, or Pledgee, to any and all disciplinary action permitted under these Rules and the Procedures, including, without limitation, the Corporation's right to cease to act pursuant to Rule 10, or (B) is neither a Participant, Limited Participant, nor Pledgee, to any and all actions, obligations, or rights permitted under any agreement made between the entity and the Corporation. A~~

DTCC Systems Participant that has authorized another party, such as a Third-Party Provider, to access and use DTCC Systems will be responsible for such authorized party's compliance with the requirements of this Rule 38(A) and any compliance failure by that authorized party will be deemed to be a failure of the authorizing DTCC Systems Participant.