Nasdaq Clearing Member Risk Committee Charter

Revision 1.1
FINAL

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<tr>
<th>Approved by</th>
<th>Board of Directors Nasdaq Clearing AB</th>
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<tr>
<td>Date of approval</td>
<td>19 Sep 2019</td>
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## Document History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Published</th>
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<th>Summary of Changes</th>
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<tbody>
<tr>
<td>1.0</td>
<td>21 March 2019</td>
<td>Elin Childs</td>
<td>First draft of new charter</td>
</tr>
<tr>
<td>1.1</td>
<td>19 September 2019</td>
<td>Elin Childs</td>
<td>Clarified MRC’s roles and responsibilities to align with the new risk policy framework</td>
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Purpose
The Nasdaq Clearing Member Risk Committee ("MRC" or the "Committee") is appointed by Nasdaq Clearing AB’s ("Nasdaq Clearing" or "the Company") Board of Directors ("the Board"). The Committee is established in accordance article 28 of the European Market Infrastructure Regulation (EU) No 648/2012 ("EMIR") and is an advisory committee to the Board.

The Committee advise the Board in their risk oversight role ensuring that the Company’s risk management framework is appropriate and functioning as intended and the level of risk assumed is consistent with Nasdaq Clearing strategy and risk appetite.

The governance arrangements outlined in this MRC charter ("Charter") shall be publicly available.

Objective
While management retains ownership and is accountable for the day-to-day management of risk, the MRC shall advise the Board on any arrangement that may impact the risk management of Nasdaq Clearing, not exhaustingly listed below but which includes at least the following matters:

- Review Nasdaq Clearing’s risk management appetite and risk strategies.
- Review all revisions to Nasdaq Clearing’s sub-policies to the Board level policies related to the below matters the Committee is required to advise the Board on, unless Nasdaq Clearing deems such policy changes to be of such immateriality that they do not require MRC’s review.
  Examples of these policies include policies related to margin, credit risk management and framework for calculating liquid financial resources. If MRC were not to agree with the proposed material changes to sub-policies MRC can request these changes to be presented to Board for approval.
- Review and monitor internal and external review findings (such as internal audit findings) and remedial actions.
- Review risk reports.
- Review material stress testing and reverse stress testing results.
- Review margin model parameters including margin off-set provided on at least an annual basis.
- Review and discuss the outcome of hypothetical narrative scenarios and thematic stress testing results.
- Periodically review and provide advice on the back testing, sensitivity testing, stress testing and reverse stress testing results and analysis.
- Review the results of validation and yearly re-validation.
- Review model performance results quarterly.
- Review the systems and valuation models used in a potential scenario where pricing data is not readily available or reliable.
- Review the results of the annual fire drill exercises including any potential actions as a result of the fire drill.
• Review and discuss the robustness of the default fund framework and its ability to reflect market movements annually including any material revisions of the framework, default fund structure and other financial resources.
• Review risks associated with new initiatives (e.g. clearing of new classes of instruments).
• Review, discuss and challenge identified risks, potential control deficiencies and their potential impact to the strategy of the Company.
• Give advice on other matters as required by the Board.

The MRC shall for instance advise the Board by providing non-objection to:

• Board level risk management policies.
• Proposed follow-up actions from the hypothetical narrative scenarios and thematic stress testing on an annual basis.
• New margin models and new margin add-ons.
• Material margin model changes, material margin add-on changes and material model parameter changes (where the impact is deemed material in accordance with the ESMA’s opinion under EMIR Article 49). The framework used by Nasdaq Clearing to identify extreme but plausible market conditions at least on an annual basis.
• The remedial actions proposed to address the validation and re-validation findings including the proposed actions associated with a potential model validation rejection.
• Any changes to the categories of admissible clearing members and the admission criteria.
• The annual outsourcing report and outsourcing of functions.
• The liquidity risk framework, any material changes to the liquidity risk framework and the liquidity plan.
• Any changes to the definition of highly liquid financial instruments and any changes to the waterfall.

**Membership of the MRC**

The MRC shall be composed of two independent Nasdaq Clearing Board members, six clearing members and four clients. The clearing members and clients are each a “Committee Member”.

The Board shall appoint the two independent Nasdaq Clearing Board members and elect one of them as the Chairperson. In the Chairperson’s absence the other independent Board member shall act as the Chairperson.

Nasdaq Clearing Chief Compliance Officer shall act as the MRC Secretary.

The Chairperson may, on a regular or ad-hoc basis invite Nasdaq Clearing employees and external independent experts / academics to attend meetings in a non-voting capacity (i.e. they cannot give their non-objections). Additionally, competent authorities may request to attend MRC meetings in a non-voting capacity. In consultation with the Committee Member Representatives, the Chairperson may
delegate Committee advisory responsibilities to sub-committees or discussion forums. The Committee Member Representatives can invite experts from their institutions to the sub-committees and discussion forums.

**Committee Member Selection Criteria**

**Selection criteria related to the six clearing members:**

- The two clearing members in the financial market and the two clearing members in the commodities markets with the highest default fund contribution (12-month average) during the most recent 12 months will be offered to appoint a Committee Member Representative. This is subject to the contribution being deemed to be representative of the clearing members’ current exposures and reasonably indicative of the clearing members’ future 12 months exposures.

- The selection criteria of the additional two clearing members are: Take the largest commodity clearing member not already identified as one of the first four members and the largest financial clearing member not already identified as one of the first four members in terms of default contribution (12-month average during the most recent 12 months). For the identification of these two additional clearing members the balance between Nordic / non-Nordic representation should also be considered, meaning that such representation should be used as a selection criteria to adjust representation to two or three clearing members representing each geographical group.

- In case a clearing member rejects to be a Committee Member, the clearing member with the sixth or seventh largest default fund contribution across the three markets will be offered to be a Committee Member, etc.

**Selection criteria related to the four clients are:**

- The two clients with the highest (indirect) default fund contribution (12-month average) in the financial market and the two clients with the highest default fund contribution (12-month average) in the commodities market will be offered to be a Committee Member. This is subject to the contribution being deemed to be representative of the clearing members’ current exposures and reasonably indicative of the clearing members’ future 12 months exposures.

- In case a client rejects the possibility to be Committee Member, the client with the fifth largest default fund contribution across the three markets will be offered to be a Committee Member, etc. taking into consideration the balance between representation across the financial and the commodities markets.

**Required Competencies and Expertise of the Committee Member Representatives**

The appointed Committee Members shall each nominate a representative, each a “Committee Member Representative” which shall together form a committee with the aim to have expertise and competencies within:
• General Risk Management and Governance (including risk appetite, tolerances and new product approval);
• Credit Risk (including modelling of ratings, capital allocation, stress testing and default fund rules);
• Market Risk (including modelling of future exposures/collateral, valuation of contracts and stress testing);
• Liquidity Risk (including modelling of liquidity risk, collateral handling and liquidity planning);
• Capital Risk (including capital management and capital adequacy);
• Operational Risk (including risk identification, incident management, outsourcing and cyber risk);
• Model Risk (including model development and validation);
• Trade operations (including pre-trade vs. post-trade and auctions);
• The equities, commodities, seafood and fixed income markets; and
• Clearing house operations and regulatory expertise.

The Committee Members and Committee Member Representatives are appointed by the Board on a 24 month cycle at the first ordinary Nasdaq Clearing Board meeting following the expiration of the 24 month cycle.

The appointed Committee Member Representatives shall at the time of their nomination provide a curriculum vitae and any required information to verify their competencies.

The Board may reject a nomination of a Committee Member Representative if such nominated representative does not satisfy the criteria set forth above, if the nomination does not contribute to the overall composition of the Committee or if there are other material reasons which from the Board’s point of view would hinder an appointment as a Committee Member Representative.

At the start of each 24 months cycle, the Chairperson is responsible for reviewing the Committee’s joint competencies within the areas above. The outcome of the review shall be presented to the MRC at the first meeting in the 24 months cycle.

Following such review, the Board may request the Committee Member to nominate another representative to ensure that the joint expertise and competencies within MRC is sufficient at all times.

In exceptional cases and subject to Board approval, the relevant Committee Members have the right to nominate a deputy Committee Member Representative. The deputy will also need to satisfy the criteria set forth above.

Deputy Committee Member Representatives, if any, may only attend meetings and give their non-objection where the ordinary Committee Member Representative is unavailable and has given prior notice of her or his absence.
Reporting

Reports from the Committee
The Chairperson provides reports, including any opposing opinions in relation to decisions taken, to Nasdaq Clearing Board of Directors. The MRC meeting minutes shall be provided to the Board and where appropriate be supplemented by a report from the Chairperson.

Reports to the Committee
All MRC members, potential sub-committees and other key functions may escalate issues to MRC. Nasdaq Clearing Chief Executive Officer, Chief Risk Officer or Chief Technology Officer provide reports, as appropriate and/or requested to the MRC.

Organizational Guidelines

Committee Meetings

Frequency and Schedule
The MRC shall meet once per quarter, or more frequently, as called by the Chairperson. As and when needed, the Chairperson may call additional meetings of the Committee. Any member of the MRC, as well as Nasdaq Clearing Risk Management, may request the Chairperson to convene a meeting at any time.

Meetings are held at Nasdaq Clearing’s premises in Stockholm unless other arrangements are deemed necessary by the Chairperson.

Reasonable efforts shall be made to consult MRC on developments impacting Nasdaq Clearing’s risk management in emergency situations.

Quorum and Decision-making
A MRC quorum comprises at least six Committee Members and must include the Chairperson and three clearing member representatives and two client representative. Committee meetings may be held telephonically or by other media which allows members to hear and participate in the Committee proceedings.

Resolutions shall be adopted by a simple majority of the votes cast, i.e. a majority of the non-objections given. In the event of a tied vote, the Chairperson shall have the casting vote.

Non-objection shall have the meaning of not opposing to the decisions required.

The advice and decisions taken by the Committee shall not be under any direct influence of Nasdaq Clearing management.
Agenda
The Nasdaq Clearing Chief Risk Officer shall propose the agenda, including setting a forward agenda to outline topics that will be considered / discussed over the course of the year. The proposed agenda shall be agreed by the Chairperson. Any Committee Member Representative can propose agenda topics.

Dedicated fora for specific topics
At the discretion of the Chairperson and Nasdaq Clearing CRO jointly, the MRC may appoint a dedicated forum for specific topics where the Committee Member Representatives with detailed content knowledge and expertise in that specific topic are requested to participate. The dedicated forum should be used to lead informed discussions aiming to provide recommendations regarding the specific topic to MRC.

Committee Records
Agenda, supporting documentation and previous meeting minutes will be circulated to the MRC members in advance of a meeting, at least five business days prior to the meeting. In special circumstances, the agenda or the supplementary documentation may be handed out at a later stage. The Secretary will prepare, circulate, and keep minutes of each MRC meeting. The MRC Chairperson shall attest the meeting minutes.

The minutes shall contain all decisions made by the MRC. Discussions concerning important matters, the non-objections given, any opposing opinions and if a member refrains from participating in a decision due to a conflict of interest shall be recorded in the minutes.

Confidentiality of Committee Information
Committee information may only be distributed as prescribed in this Charter or by the Chairperson, as part of the implementation of actions authorized by the Committee or as necessary to comply with internal reporting requirements.

In order to maintain confidentiality, persons not employed by the Committee Members or Nasdaq Clearing are not permitted to participate in Committee meetings other than to give a presentation as requested by the Chairperson.

The Committee Member Representatives, their delegates as well as experts from the Committee Member’s organizations invited to sub-committees or discussion forums shall sign a confidentiality agreement where they undertake to not, subject to regulatory requirements, disclose the matters discussed in the MRC or the decisions taken in the Committee.

Remuneration
Each Committee Member Representative shall be responsible for the costs associated with its participation in the MRC and shall not be entitled to demand or receive any fee or compensation from Nasdaq Clearing for such participation. However, on a case by case basis, an independent expert might be compensated by Nasdaq Clearing upon agreement.
Termination and Disqualification
If one of the clearing members or clients was to change its role from member to client (or vice versa) or stop being a member or client, the basis under which it has been appointed a Committee Member would have changed, and it is up to the Chairperson and the Chief Risk Officer to jointly decide if the clearing member or client can continue as a Committee Member during the appointed period on a non-voting capacity or if its appointment as Committee Member should be terminated. To ensure a Committee quorum, a new clearing member or client shall be appointed in a timely manner in line with the selection criteria outlined above. Nasdaq Clearing Risk Management is responsible for ensuring that all new Committee Member representatives receive a suitable introduction.

The Committee Member or its Committee Member Representatives shall inform the Committee of any circumstances that might cause disqualification of the Committee Member to form part of the Member Risk Committee.

A Committee Member Representative shall also inform the Committee if they terminate their employment at the respective clearing member or client. In such a scenario a new Committee Member Representative from that clearing member or client shall be appointed according to the criteria set out above.

Conflict of Interest
Each Committee Member Representative shall disclose and address any potential conflict of interest in any matters discussed in the MRC. Where the Chairperson determines that a Committee Member or Committee Member Representative has an actual or potential conflict of interest that Committee Member shall not be allowed to give their non-objection in that particular matter.

Amendment of the MRC Charter
This Charter shall be reviewed on an annual basis. Committee Member Representatives may propose amendments to this Charter and any amendments are subject to a non-objection from the MRC and shall be approved by the Board.

Information to the Swedish Financial Supervisory Authority
The Chief Compliance Officer is responsible for promptly, in writing, informing the Swedish Financial Supervisory Authority (Sw: Finansinspektionen) of any decision of the Board where it does not follow the advice of the MRC.
### Appendix 1 – Committee Members

#### Committee Members

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<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Delegate</th>
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<tbody>
<tr>
<td>Chairperson</td>
<td>Lars Nyberg</td>
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<tr>
<td>Independent Board Member</td>
<td>Osmo Jauri</td>
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<tr>
<td>Member Representative</td>
<td>Erkka Näsäkkälä, SEB</td>
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<td>Member Representative</td>
<td>Fredrik Arnö, Fortum</td>
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<td>Member Representative</td>
<td>Guillaume Pernice, Société Générale</td>
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<tr>
<td>Member Representative</td>
<td>Magnus Olsson, Swedbank</td>
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<tr>
<td>Member Representative</td>
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<tr>
<td>Client Representative</td>
<td>Matthew Little, Vattenfall</td>
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<td>Client Representative</td>
<td>Michael Spieler, Uniper</td>
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