

Nasdaq Clearing responses to member questions on the recent default

2018-09-27

Introductory note:

The following Q&A responds to a series of questions asked by members regarding the default event on September 11. It is being published as a matter of information for other Nasdaq Clearing members and should be read in conjunction with previously issued market notices describing the default.

The information contained in these responses is:

- intended for Nasdaq Clearing members only;
- intended for general guidance only; and
- is not represented to be complete. In relation to this Nasdaq Clearing is required to operate within the scope of applicable laws and regulatory requirements, which include adherence to contractual obligations, confidentiality and other restrictions on disclosure of information as apply to it. In compliance with this, Nasdaq Clearing has answered the questions below exercising its best efforts disclosing the information below.

Q&A

General

1. Please provide details of the defaulting position in terms of products, contract months and size.

The products were Nordic Power and German Power futures and forwards (defined as “DS Futures, i.e. deferred settlement futures), as defined in the Clearing Rules .

Legal and regulatory restrictions prevent further disclosure of information at this time.

2. What was the size/maturity of the offending positions vs. Open Interest and daily volume?

Legal and regulatory restrictions prevent further disclosure of information at this time.

3. What % of the market was the trader for each of the contracts (%OI)?

Legal and regulatory restrictions prevent further disclosure of information at this point.

4. What actions as part of the default management process remain to be taken?

The default management process has been completed insofar as the relevant positions have been closed out and the Default Loss apportioned, with Default Funds replenished (including the introduction of the temporary Junior Capital).

Nasdaq Clearing is exploring all rights and available options to pursue recovery for members and clients to minimize any shortfall and will liaise with members and clients on this matter. Any funds recovered by Nasdaq Clearing will be apportioned in accordance with the Default Fund Rules – recovered funds are paid in reverse order of use, so will first be applied towards the Default Fund Participants on a pro rata basis and once the Default Fund Participants

have recovered their entire replenished amount be applied towards Nasdaq Clearing's Junior Capital.

Self-Clearing Criteria

5. Under the rules, can natural persons participate as direct clearing members and if so, what is the membership criteria?

The same membership criteria applies to private individuals as to Clearing Members, with the exception of higher capital requirements for private individuals.

The Clearing Rules require that a member has a minimum equity of 1 MEUR. For private individuals, Nasdaq Clearing requires the member to have financial resources of at least 70 MEUR.

6. How did NASDAQ ascertain that the defaulting Clearing Member had adequate financial resources, a suitable organization, adequate levels of competence, necessary risk management routines, appropriate technical systems and other membership requirements?

By way of general commentary, Nasdaq Clearing has, on an annual basis, confirmed that the relevant clearing member has met the financial requirement. Members' operational capacity is assessed by Nasdaq Clearing based on the way in which they fulfil their obligations towards Nasdaq Clearing. Members are required to have effective securities and cash settlement arrangements to complete the delivery and payment obligations that are imposed on them as a result of clearing operations. They must also have effective arrangements in place for collateral and contributions to the default fund and to regularly meet the collateral requirements and default fund requirements that are imposed.

Nasdaq Clearing has commissioned a risk management review by an external firm, Oliver Wyman, and will await the conclusion of that review to comment further.

7. How many other natural persons does the CCP have as members?

Nasdaq Clearing AB have no other natural persons as clearing members.

8. What is the NASDAQ governance process for accepting a new self-clearer?

The requirements to become a Clearing Member are set out in the Clearing Rules. The Member Services team is responsible for coordinating the on-boarding of new clearing members, including application administration and sanction screening.

Clearing membership applications are approved by the Clearing House following its policies and procedures and will include Legal, Credit Risk and Surveillance.

9. Do GCMs and CMs or any other Clearing Member category have different required contributions to the default fund?

The Default Fund contribution requirements are set out in the Clearing Rules. The methodology for calculating contributions to the Default Fund is the same for General Clearing Members and Clearing Members.

Margin

10. What was the required margin methodology and was it followed?

A Nasdaq Clearing proprietary version of the SPAN (Standard Portfolio ANalysis) margin methodology is used for the commodities market.

The margin model was followed. The margin methodology guide can be found on our website (see link immediately here below). Nasdaq Clearing's implementation of the widely accepted SPAN methodology uses a parametric approach to defining scenarios on which portfolios are margined.

https://business.nasdaq.com/media/Commodities-Margin-Guide_2017-03-24_tcm5044-30725.pdf

https://business.nasdaq.com/media/Margin-Concentration-and-Position-Limit-Policy_2018-08-20_tcm5044-30733.pdf

11. What scenarios were used to develop the margin methodology, including periodic historic large spikes?

The margin model is set to cover stressed market conditions, covering at least 99.2% of all 2-day market movements over the recent 12 month period. In the final step of the margin curve estimation a pro-cyclicality buffer of 25% is applied.

12. What MPOR were you using and how did market liquidity factor into the MPOR?

The MPOR (Margin Period of Risk) for the relevant products is two days.

13. Was concentration margin applied and how is it calculated?

Nasdaq applies concentration add-ons if the size of calculated Margin Requirement exceeds a certain threshold for a particular product group. The policy is available on Nasdaq Clearing's website, please see the link below. The threshold was not exceeded in this particular case.

https://business.nasdaq.com/media/Margin-Concentration-and-Position-Limit-Policy_2018-08-20_tcm5044-30733.pdf

14. Are there other margin add-ons applied for liquidity, creditworthiness and wrong-way-risk positions? Are these aspects routinely monitored?

Liquidity is reflected in the concentration add-ons described under question 13 above. Creditworthiness of all members and clients to Nasdaq Clearing is monitored and followed up regularly by the internal Clearing Risk Committee at Nasdaq Clearing. No add-ons related to credit worthiness are applied currently.

15. How are margin discounts and offset rules calibrated and applied?

Margin discounts are calibrated on historical price deviations between relevant instrument prices. The default setting in Nasdaq's margin model for Commodities, i.e. the SPAN model, is that each contract is stressed individually. When all positions are stressed, margin offsets are applied. The offset between Nordic and German power was approximately 50% at the time of the default.

16. How often do you update the parameters of your margin methodology?

We update the parameters of the margin methodology on a monthly basis.

17. How often is variation margin calculated and does NASDAQ have the ability to make special VM calls if losses accumulate? Was a special call made or considered?

Nasdaq Clearing calculates the initial margin and market value of all cleared portfolios once an hour through-out the day. Nasdaq Clearing may calculate an Intraday Margin Requirement and did so on Monday 10 September to the defaulted member.

18. What was the amount of VM and IM?

Subject to legal and/or regulatory restrictions, information about the defaulting Clearing Member's margin will be provided to Default Fund Participants confidentially.

Risk Monitoring and Surveillance

19. Did Nasdaq Clearing have an early warning system?

Nasdaq Clearing calculates the initial margin and market value of all cleared portfolios once an hour through-out the day. The default event was triggered by an extreme change in the spread between German and Nordic Power. When that change occurred the portfolio experienced losses and due to this the margin system reacted and calculated an Intraday Margin Requirement (IDMR).

20. If you did, when did you become aware of default risk and what did you do?

The margin payment obligation triggered by the IDMC on September 10 was required to be met within 90 minutes and was not met in full by the Relevant Clearing Member, which triggered initial default procedures.

21. Are there any limits to large trader positions?

Clearing Members are subject to the Trading Rules which also bind them to the Trading Procedures of the Exchange. The Trading Procedures state inter alia that the Exchange will reject orders that exceed the maximum allowed notional value or volume, as determined by the Exchange from time to time (Section 8) and that the Exchange may reject or cancel any order which contravenes the Trading Rules or applicable law (Section 5.6).

The Trading Procedures are available in appendix 4 of the Trading Rules,

http://www.nasdaqomx.com/digitalAssets/106/106872_171120-trading-appendix-4---trading-procedures--clean-.pdf.

22. Are there any other intra-day trading limits?

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23. Are there checks on the position limits vs. capital, especially for direct clearing members?

Nasdaq Clearing and Nasdaq Oslo ASA operate in line with its published margin concentration and position limit policy to manage large exposures.

24. Are limits granted on the basis of gross net worth or do limits consider the member's unencumbered liquidity?

Nasdaq Clearing and Nasdaq Oslo ASA operate in line with its published margin concentration and position limit policy to manage large exposures.

25. With what frequency was the member required to report his unencumbered liquidity position?

Nasdaq Clearing completes checks with respect to compliance with financial requirements yearly. Please see the answer to questions 6.

26. What were the reasons for the increased position limit on German "other months" in July this year and was there any connection between the increase and the default?

The position limit set and in force since 1 January 2018 for the category German "other months" was 10 128 357 MWh.

The limit was based on 35% of open interest number at Nasdaq Oslo in German Power baseload contracts for this commodity category at the year-end 2017.

The Norwegian FSA as the Competent Authority for setting the position limits for Nasdaq marketplace decided to change (increase) the position limit for category German "other months" to 14 469 309 MWh. The change entered into force on 1 July. The new limit reflected the increase from 35 to 50% of open interest.

27. Are correlation breakdowns included in stress testing?

Stress test models are used for determining potential losses (when Margin Requirements are surpassed) in extreme events. These results are used to size Default Funds and the amount of capital held by the clearing house. Stress tests include both historical scenarios and hypothetical scenarios that are designed to cover events that are extreme but plausible. In these tests correlation between different markets are completely broken down, i.e. Nordic and German power prices are stressed apart.

28. When was the last counterparty review conducted for the member and how often are those reviews?

All members are reviewed on an annual basis with focus on the financial situation of the member. In addition, operational capacity is assessed throughout the year. Members' operational capacity is assessed by Nasdaq Clearing based on the way in which they fulfil their obligations towards Nasdaq Clearing. Members are required to have effective securities and cash settlement arrangements to complete the delivery and payment obligations that are imposed on them as a result of clearing operations. They must also have effective arrangements in place for collateral and contributions to the default fund and to regularly meet the collateral requirements and default fund requirements that are imposed.

The last review of the relevant clearing member's financial situation was conducted October 2017 when the last official data was published by the Norwegian Tax Authority. There have been no identified issues with the relevant clearing member's operational capacity.

Default

29. How did you decide when to put the trader into default?

Initial default procedures were triggered on Monday Sept 10, when the member did not fully cover the IDMC issued. The Default Committee was initially convened on Monday September 10 and then met regularly throughout the following days. The member was declared to be in default on Tuesday September 11 at 08:24.

30. Did you notify the regulators? What regulators did you notify and when?

Consistent with our regulatory obligations we notified all relevant regulators. These notifications are confidential.

31. Did the trader's declared bankruptcy impede the collection of margin?

Please note that as far as Nasdaq Clearing is aware the relevant Clearing Member has not been declared bankrupt. There was no issue with realising the value of all collateral provided by the relevant Clearing Member.

32. Did the defaulter have stable trading positions immediately prior to default or had his positions increased immediately prior to default?

Positions were relatively stable prior to the default, with positions gradually decreasing in net exposure during the two weeks leading up to the default.

33. What was the relative change in the margin position of the defaulter between the day before default and the day of default?

Initial Margin was relatively stable but the change in spread had a big impact on Variation Margin, i.e. the P/L of the portfolio.

Auction

34. When did the auction occur compared to the declared default?

The relevant clearing member was declared to be in default on Tuesday September 11, at 08:24. Between Tuesday morning and Wednesday evening there was an ongoing process to close-out the portfolio of Transactions in the Clearing Account, including two attempts to sell the portfolio of Transactions by auction. The portfolio of Transactions was closed-out on Wednesday evening after the second auction process resulted in the best committed bid.

35. How were the entities that participated in the auction chosen?

In this situation, the Default Committee made an assessment of the most appropriate process for closing out the relevant clearing member's position, this included (but was not limited to):

- *an assessment of which members had sufficient capacity and were likely to be able to bid on a significant part of this position;*
- *how to minimise losses in the relevant clearing member's defaulted portfolio by holding a closed auction in order to avoid creating extreme market movements and having to close-out in more volatile market conditions.*
- *how to ensure there was no information leakage on the default close-out and/or to get too many market participants in an insider position*

Four members were invited to bid in the closed auction.

It is Nasdaq Clearing's assessment that the chosen strategy and the selected number of bidders was reasonable to obtain the best price possible at the relevant time.

36. How many participants were chosen and how many bids were received?

4 participants were chosen.

Due to applicable legal and regulatory restrictions we are at present unable to disclose further information about the auction. We are actively considering when and how such applicable legal and regulatory restrictions could be overcome in order to disclose further information to members.

37. How were they incentivized to bid effectively?

The main incentives for the bidders in an auction is to protect their own assets in the default fund and to maintain a well-functioning market.

In general, the waterfall is designed in such a way as to create incentives for the participating members as well as the CCP to maintain a functioning market and avoid losses that could, in an extreme scenario, cause the CCP to go into recovery, requiring e.g. tear-up of contracts and ultimately a close-down of the market.

38. How long did the auction take place?

The relevant clearing member was declared to be in default on Tuesday September 11, at 08:24. Between Tuesday morning and Wednesday evening there was an ongoing process to close-out the portfolio of Transactions in the Clearing Account, including two attempts to sell the portfolio of Transactions by auction. The portfolio of Transactions was closed-out on Wednesday evening after the second auction process resulted in the best committed bid.

39. How did you become comfortable that the prices acquired from the auction were fair?

That is a question of judgment on the available evidence at the time. The accepted bid was the best committed bid received in the auctions.

40. What discretion are you able to exercise regarding these close-out procedures and who can exercise that discretion?

Nasdaq Clearing's default management process is set out in accordance with Article 48 of EMIR and the Nasdaq Clearing Rulebook, and the Instruction for the Default Committee of Nasdaq Clearing.

The Nasdaq Clearing Default Committee has a broad mandate to reduce the risk in the portfolio.

Under Nasdaq Clearing's Default Strategy for Commodity Derivatives, Nasdaq Clearing may choose to close out a defaulting member's portfolio through a closed auction, attempting to unwind the entire portfolio to one participant or divide the portfolio between two or more participants. The process is reliant on members contributing prices on close-out volumes. One or several members may participate in an auction and the portfolio is allocated based on the best bid and ask quotes or the best bid for the entire portfolio.

Default Fund

41. How was the default fund sized? Cover 2?

Nasdaq Clearing's waterfall of resources for the Commodities clearing service is sized according to Cover 2. The waterfall encompasses both Nasdaq Clearing's own resources as well as the member contributed default fund. The default fund itself is sized at a minimum to Cover 1, i.e. the largest stress test exposure or the sum of the second and third largest exposure. The size of the default fund is updated at least on a quarterly basis and should be enough to cover the largest Cover 1 amount over the recent 6 month period.

42. Was the defaulter one of the three largest members?

No, the defaulted member was not one of the three largest members, but the margin exposure was significant.

43. Was there a change in the DF when it was resized last July and what was it? If it was reduced, what was the basis for this determination?

The default fund was resized on 2018-09-01, 2018-06-01 and prior to that 2018-03-01. The last two updates were both increases, from a level of 74 million EUR in March to first 133 million EUR and then 166 million EUR on 2018-09-01.

44. Are member allocations by initial margin net of options value?

Member allocations are by weighted initial margin, where no variation margin or non-realized market values, such as option values, are taken into account.

45. Junior capital has been increased on a temporary basis. How long will this level be maintained and what will it be on a permanent basis?

Following the default, Nasdaq Clearing implemented a temporary Junior Capital addition for the Commodity Market of 200 million SEK (approximately EUR 19 million). This new capital is

in addition to the EUR 7 million that Nasdaq has already replenished in the Default Fund as Junior Capital and is committed for a period of 90 days.

46. If the waterfall had been exhausted without covering all losses, what would have happened? Could the other non-Commodities Default Funds have been mutualized?

The other non-Commodities Default Funds would not be used in a default in the Commodities market. Please refer to the illustration of the waterfall (available on our website and in the Q&A). Apart from Nasdaq's own capital in the waterfall, there is a part which is mutualized between the Commodities and Financials markets, at a senior level in the waterfall. This is the only part where the Financials members could potentially suffer a loss in the event of a default in the Commodities market.

If the full commodity markets waterfall had been exhausted, that would have triggered the initiation of Nasdaq Clearing's recovery plan. This means i.e. using the Assessment Power and other potential recovery tools.

47. Does the CCP have a formal resolution/recovery plan? If so, is this public?

The CCP has a recovery plan that has been approved by the board and submitted to the FSA and Central Bank. It is not public.

Risk Committee

48. Does the CCP have a risk committee and what is its role as it relates to CCP membership, review/approval of margin models, default fund sizing and frequency of re-sizings?

The Member Risk Committee (MRC) exercise oversight, in an advisory role, over Nasdaq Clearing's risk management strategies, models, policies and procedures. The members of the MRC receive regular reports from the risk management department of Nasdaq Clearing.

The Member Risk Committee consists of 4 representatives from member firms, 3 client representatives, and 2 independent board members.