



N2EX Margining Solution

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1 Introduction

This description covers the N2EX margining solution for the physical market. The main areas covered are collateral calls, margin components and algorithms, base collateral, daily overnight position limits, daily follow-up and default handling.

We refer to local UK time in this document.

Please also refer to the Clearing Rules, and to margin calculation examples *available at the N2EX website*.

1.1 Document Version Handling

Version	Date	Comment
2.0	October 29, 2009	Updated and separated from 'N2EX Clearing & Margining Solution'
2.1	December 17, 2009	<i>Additional sections:</i> 2.7 Summary of Margin Components (figures) 4. Margin Parameters 5. Daily Margin Routine and Default Handling <i>Updated section: 2.6 Billing Margin</i>
2.2	November 8, 2010	<i>Updated Sections:</i> 2.2- 2.3 <i>Initial Margin & Variation Margin</i> 3.3 – 3.4 <i>Base Collateral Call & Daily Overnight Position...</i>
2.3	April 4, 2011	<i>Updated section</i> 3.2 <i>Limiting Overnight Risk</i> 3.4 <i>Daily Overnight Position Exposure</i> 5. <i>Daily Margin Routine and Default Handling</i>

2 Collateral Calls

There are two collateral calls per clearing day:

The *end-of-day margin call* based on the previous day's positions issued at 08:00 and the *intra-day margin call* calculated at 11:00 when the DAM results are available. The intra-day margin call is issued at 12:00, at the latest. The calls have to be covered by collateral before 11:00 (end-of-day) and 14:30 (intra-day).

The current Collateral Call presented by Nasdaq OMX Stockholm AB (NOMXS) can be monitored through reports in the clearing system. All members are expected to actively track their current margin requirements through the intra-day margin reports.

For all Members the required collateral, reported collateral, and any surplus or deficit in collateral is listed in the 'Margin Summary' report. *Please also see the section 'Daily Follow-up and Default Handling' for details.*

Collateral can be posted as cash in a Cash Collateral account or as a Bank Guarantee/Letter of Credit (in future referred to as 'Guarantee'). The cash collateral account (fixed charge) must be opened with an acceptable bank to NASDAQ OMX Stockholm AB as described on the N2EX website.

2.1 Margin Components Overview

The core elements of the Margin Methodology are described below:

Daily closing prices and trade prices are used for the margin calculation of tradable contracts and the positions are netted into contract 'buckets', in order to calculate the expected cost of closing out the positions and to provide the highest possible degree of netting (Initial and Variation Margin). A 'bucket' is the smallest time period covered entirely by a listed contract.

Closer to delivery, the Clearing House calculates a Delivery margin which covers an imbalance risk until delivery is complete (seller) and a cash settlement risk until settlement is calculated (buyer). The contracts are divided into half-hour 'buckets' and the net contract value per bucket is calculated to reflect the settlement and imbalance risk.

The Billing Margin reflects pending, invoiced, cash settlement both to and from the NOMXS. Payments owed to NOMS shall be subject to an additional margin payment whilst payments owed by NOMXS to the member shall create a Margin offset.

The sum of all of the above mentioned margin components is defined as the Daily Margin Call. The margin components are described in detail in the following sections.

The Base Collateral Call is entirely separate from the Daily Margin Call. It is fixed during the membership process and reflects the expected overnight exposure of the new member. The Base Collateral must be posted by the new member before trading may commence. In effect the new member places a voluntary limit upon his overnight exposure in tradable products. The member is expected to keep within these self-imposed limits for overnight exposure. Exceeding the expected daily overnight position limits may trigger NOMXS to review the Base Collateral requirement. Please see the section 'Base Collateral and Daily Overnight Positions' for details.

In exceptional cases, the clearinghouse reserves the right to issue a separate Extraordinary Margin Call. Once issued this must be covered within a short notice period. Instances that could lead to an Extraordinary Margin Call being issued include major price fluctuations and higher credit risk. The Extraordinary Margin Call can be issued to individual counterparties or to the market as a whole.

The Collateral Call is the total margin call to be covered by the member and is defined as follows:

Collateral Call = Base Collateral Call + Daily Margin call + Extraordinary Margin Call

where;

the Daily Margin Call always will be included as a negative number or zero

the Collateral Call, Base and Extraordinary Margin Calls are expressed as negative numbers

2.2 Initial Margin

The Initial Margin reflects the risk of default in the contracts' buckets for delivery from D+3 onwards (current horizon), where 'D' is the day of the margin calculation. It estimates the expected cost of closing out the open positions of a member going into in default.

The Initial Margin must be covered by all members with open positions irrespective of whether that position is net long or short, therefore the Initial Margin is expressed as a negative number. This prohibits the use of Initial Margin to offset other margin components.

In order to provide the maximum offset between contracts, the Initial Margin is calculated based on the net delivery position per time bucket. The length of the time bucket is based on the shortest listed contract fully overlapping the actual period. For the period D+3 until D+5 the bucket length is 1 hour, since the DAM contracts are tradable as far as five days ahead (Easter holiday).

For EFA contracts the buckets for a certain day cover hours 23-23 and for calendar products the buckets cover hour 00-24. There is no position netting between EFA and calendar products.

The price of the buckets (clearing price) is based on the market price of the shortest fully overlapping contract.

Unique risk parameters may be applied to each individual bucket.

Formula:

*Initial Margin (per bucket) = - (position * lot size * clearing price * risk parameter)*

The position is the net position of the bucket in MW (without sign)

The lot size is the number of hours covered by the bucket

The clearing price is the actual market price of the bucket

The risk parameter is described below

Risk Parameter:

The Risk Parameter is managed individually for each tradable delivery day. It is also possible to set Individual parameters for each bucket within a delivery day (0-100%), but there will typically be one global value for each delivery day.

The risk parameter would typically increase as the contract approaches delivery. This is managed via a risk matrix plotting 'days to delivery' versus a 'risk parameter' determined by interpolation. As delivery approaches the risk parameter increases towards 100% to reflect the gradually increasing settlement and delivery risk.

The daily Risk Parameter is calculated according to the formula below:

*Risk Parameter = Daily Volatility (%) * 3 * SQRT(d)*

where; the *Daily Volatility* is estimated by the Clearing House, the *factor '3'* represents 3 standard deviations and '*d*' (currently 3) is the number of days in the close-out horizon.

2.3 Variation Margin

The Variation Margin reflects the unrealised profit or loss from positions in the contracts' buckets going into delivery from D+3 onwards. The Variation Margin applies to both net buyers and net sellers. A positive Variation Margin may be used for offsetting other margin components.

The calculation method is described below:

Calculate weighted average trade prices of the trades for each particular bucket.

- WABP = Weighted Average Buy Price
- $WABP = \frac{\sum (\text{Buy Volume} * \text{Buy Price})}{\sum \text{Buy Volume}}$
- WASP = Weighted Average Sell Price
- $WASP = \frac{\sum (\text{Sell Volume} * \text{Sell Price})}{\sum \text{Sell Volume}}$

Calculate Variation Margin for each particular bucket. The variation margin for each particular delivery bucket is estimated as the sum of the market value change of the bought volume and the market value change of the sold volume. The prices used in the calculations are the Weighted Average Trade Prices (bought/sold) and the clearing price for each delivery period bucket.

- VM = Variation Margin **per bucket**
- $VM = (\text{bought volume} * \text{lot size} * (\text{clearing price} - WABP)) + (\text{sold volume} * \text{lot size} * (WASP - \text{clearing price}))$

The bought volume is the bought volume per bucket in MW (without sign)

The sold volume is the sold volume per bucket in MW (without sign)

The lot size is the number of hours covered by the bucket

The clearing price is the actual market price of the bucket

Please note that the WABP and WASP currently are displayed with 2 decimals in the Condicto Variation Margin report, but 12 decimals are used in the calculation of the Variation Margin. Though, the XML report shows the value with the number of decimals used in the calculation.

2.4 Pricing of Time Buckets

The clearing prices of the time buckets used in the initial and variation margin calculations follow the principles outlined below.

End-of-Day Margin Calculation

In the End-of-Day Margin calculation, the clearing price of a time bucket is equal to the closing price ('settlement price') of the shortest fully overlapping instrument.

Intra-day Margin Calculation

If possible, the 'current' market price of the shortest fully overlapping instrument is used as the clearing price. The rule when determining the clearing price of a time bucket is as follows:

1. Find the shortest instrument with a fully overlapping delivery period and;
2. Use the Last intra-day trade price. If no trade data is available proceed to step 3.
3. Use the Previous day clearing price for the corresponding bucket. If no data available proceed to step 4.
4. Use the Previous day settlement price for the instrument. If no data is available proceed to step 5.
5. Use the Last trade price for that instrument that can be found historically in the system
6. If none of these prices are available then find the second shortest instrument with a fully overlapping delivery period, and steps 2-6 are repeated.

Special cases are described in 'the N2EX Margin Calculation Examples' available at the N2EX website.

2.5 Delivery Margin

The Delivery Margin covers the risk for the contracts' buckets going into delivery from D to D+2. It reflects the expected cost of closing out a defaulting member's open position in products for which settlement has not yet been calculated (buyer) or delivery has not yet taken place (seller). The Delivery Margin is based on the net contract value of fixed ½-hour buckets. For net purchase amounts, the delivery margin reflects the settlement risk and for net sales amounts it reflects the imbalance risk.

The Delivery Margin has to be covered by all members and can thereby not be used for offsetting other margin components.

The Delivery Margin is calculated as the net contract value of each of the 48 fixed ½-hour buckets. It replaces Initial Margin and Variation Margin and has a short horizon (currently including D to and including D+2). The last day of the horizon includes hours 00-23 (46 buckets).

Individual risk parameters *may* be used for all 48, ½-hour buckets but typically a global value for all buckets is used. Separate risk parameters *could* be applied for buyer and seller.

Note:

Since the delivery margin for a seller covers as yet undelivered volumes, the intra-day margin call will not include fully delivered net sales from the intra-day period.

The calculation method is described below:

Calculate weighted average trade prices of the trades for each particular bucket:

- WABP = Weighted Average Buy Price
- $WABP = \sum (\text{Buy Volume} * \text{Buy Price}) / \sum \text{Buy Volume}$
- WASP = Weighted Average Sell Price
- $WASP = \sum (\text{Sell Volume} * \text{Sell Price}) / \sum \text{Sell Volume}$

Calculate Delivery Margin for each particular bucket. The delivery margin for each particular delivery bucket is estimated as the absolute value of the sum of contract value of the bought volume and the contract value of the sold volume, and always has a negative sign. The prices used in the calculations are the Weighted Average Trade Prices (bought/sold) for each delivery period bucket.

- DM = Delivery Margin **per bucket**
- $DM = - ABS ((\text{bought volume} * \text{lot size} * WABP) - (\text{sold volume} * \text{lot size} * WASP)) * \text{risk parameter}$

ABS stands for absolute value

The bought volume is the bought volume per bucket in MW (without sign)

The sold volume is the sold volume per bucket in MW (without sign)

The lot size is the number of hours covered by the bucket

The risk parameter is described below

Risk Parameter:

- Each delivery day may be managed individually with a risk parameter
- Seller: typically 100%
- Buyer: typically 100%.

2.6 Billing Margin

Once a contract goes into delivery the Billing Margin replaces the Delivery Margin. It reflects the net invoiced cash settlement amount for a specific Delivery Day ('00-24') and is calculated at the end-of day for each invoice date. The Billing margin also includes fees invoiced upon the same day.

Billing Margin – Buyer:

The Billing Margin replaces the Delivery Margin for a Buyer and covers the cash settlement (debit) due D+1, where D+1 means the following London bank day. As soon as an invoice is marked 'paid', it is excluded from the calculation of the Billing Margin Buyer.

Example: Invoices covering the delivery days Friday to and including Sunday (all due on the following Monday) would be included in the Billing Margin in the end-of day margin calculation on the Sunday. Once the invoices are paid they will be excluded from the Billing Margin calculation. If any invoice is unpaid at the intra-day margin calculation on Monday, it would be included in the calculation.

Billing Margin – Seller:

The Billing margin for the net Seller is a positive margin component which takes into account the forthcoming cash settlement from a self-billing invoice (credit) due 'D+3'. The seller's Billing Margin is included in the daily margin calls to be covered D+1 and D+2. It is 'removed' for the margin calls to be covered D+3.

Example: a self-billing invoice based on deliveries on a Wednesday (due on the following Monday) would be included in the Billing Margin in the Wednesday end-of day calculation and Thursday intra-day and end-of day margin calculations. It would also be included in the Friday intra-day calculation, but removed on the Sunday end-of day margin calculation to be covered on Monday.

Fees:

Any fees are included in the Billing Margin from the end-of-day calculation when the fee calculation and invoicing takes place, until marked 'paid'.

Follow-up on the Billing Margin:

The 'Billing Summary' report can be used to determine which invoices or self-billing invoices are currently included in the Billing Margin. Though, it is important to take into account that the seller's billing margin (margin offset) is removed according to the schedule above.

Method for Billing Summary Analysis:

Open the Billing Summary Report and select a date span covering the unpaid invoices in question. You can either search on invoice date (delivery day) or due date:

You can search by invoice date by entering today's date and then previous dates.

You can also search by due date (tick 'Due date') covering all of the dates at which the invoices become due (normally 'today' and onwards).

Remember to not tick the 'Paid' check-box as paid invoices are not included in your billing margin. 'Invoiced' must be ticked. Also tick all boxes in 'Inv. Type' and 'Report Types' (Please copy the screenshot below).

Billing Summary Report

Organisation: From: Invoice Group:
 Account: Until: Search on due date
 Status: Invoiced Paid Cancelled
 Inv. Type: Net bought Net Sold
 Report Types: Fee Report Invoice Report N2EX Misc. Invoice Report

Search on due date, example when 'today' is 24 November

Also remember to exclude self-billing invoices due 'today'.

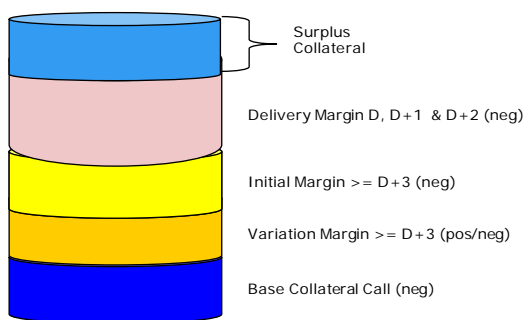
Example: self-billing invoice due on a Monday shall not be included in end-of day margin calculation performed on Sunday or the intra-day calculation on Monday. Finally, to break down the Billing Margin from a previous day, the 'Paid' check box must also be ticked and the date span must range in order to cover all invoices and fees included in the margin. Then the invoices and fees in question can be manually extracted from the search results.

2.7 Summary of Margin Components

The examples in the figures below summarize the margin components included in an intra-day margin call and an end-of-day margin call, for a buyer and a seller respectively.

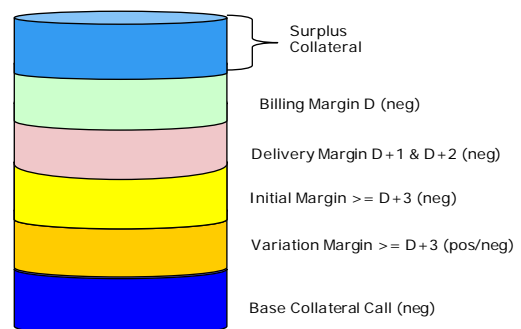
**Intra-day Margin call, cut-off D 11:00
to be covered D, 14:30**

Total Available Collateral and Margin



**End-of-day margin call, cut-off D, 23:45
to be covered D+1, 11:00**

Total Available Collateral and Margin



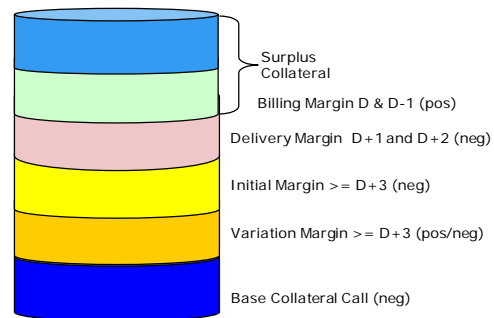
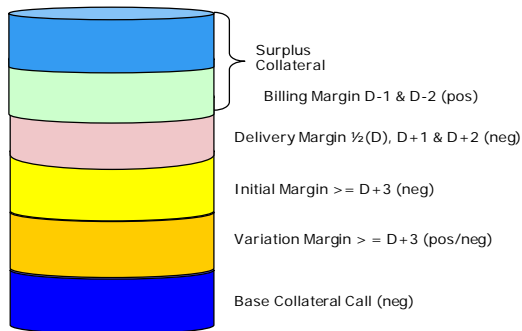
Margin Components, Buyer

**Intra-day Margin call, cut-off D, 11:00
to be covered D, 14:30**

**End-of-day margin call, cut-off D, 23:45
to be covered D+1, 11:00**

Total Available Collateral and Margin

Total Available Collateral and Margin



Margin Components, Seller

3 Base Collateral and Daily Overnight Positions

3.1 Overnight Risk

The overnight risk is related to positions entered 'between margin calls', which are not collateralized. The risk can be divided into three elements:

1. *Market risk on new positions 'long' out on the curve (typically D+3 and ahead)*
The risk of price changes to the contract in case of a close-out. Delta between the initial trade price and the close-out trade and applies to both buyers and sellers.
2. *Settlement risk for Buyers in default*
The risk that a buyer fails to cash settle delivered physical electricity.
3. *Delivery risk for Sellers in default*
The risk that a seller is unable to deliver physical electricity so that NOMXS becomes exposed to the System Buy Price.

3.2 Limiting Overnight Risk

Since contracts can be traded close to the delivery day, NOMXS must limit its overnight risk 'between margin calls'. The different tools used are briefly described below.

Daily Overnight Position Exposure

The daily overnight position exposure function is an automatic post-trade check covering net positions in contracts close to delivery. The daily overnight position is compared with the Base Collateral Call. *For further details, see the sections below.*

Intra-day Margin Call

The intra-day margin calculation takes place after the DAM results are final, and a check is performed against the available Collateral. *For further details please see the section 'Daily Follow-up and Default Handling.'*

Trade size limits and post trade checks for Spot Market Only members

The Spot Market only members will have a trade size limit dependent on their Base Collateral level. The trade size limit will impact single orders only and does not consider the total position aggregation of accepted trades. This ensures that trades are within a certain size in terms of energy to avoid that a single trade triggers a rapid increase of exposure.

All Spot Market Only members are subject to a post trade collateral check. The check sums the Spot Market Only members' Surplus/Deficit Collateral and a percentage of the absolute value of their Base Collateral. The percentage depends on if the member is long or short. The sum is called the Actual Limit and is found in the Margin Summary report. In case a member passes a warning limit a message is sent to the member informing about the status. If the Actual Limit becomes negative after a trade a new message is sent informing about the status and the Spot Market Only member is suspended from trading and clearing. All trades done before the suspension, including the trade causing the deficit, are cleared as normal. The suspension is lifted when the Actual Limit is again positive or the member is manually activated by the clearing house. The Actual Limit is increased by increasing the collateral levels or decreasing the Collateral Call (reduce exposure, deliver any short positions or pay any outstanding invoices). At all times are the members able to verify the status of their Actual Limit, Surplus/Deficit Collateral, and Base Collateral in the Margin Summary report.

3.3 Base Collateral Call

The Base Collateral Call is an up - front minimum collateral requirement to be posted before trading can commence. All new members are obliged to estimate their own Base Collateral requirements in consultation with NOMXS.

The Base Collateral Call is designed to limit the NOMX's overnight risk arising from a member default and subsequent close-out. This specifically relates to those positions which are not collateralized until the next clearing day. Base Collateral is therefore employed to cover:

- The risk of tradable contracts where collateral is due the next clearing day.
- The extended risk during non-clearing days (weekends and long holidays)

The Base Collateral for a buyer (net long position) covers the overnight market risk and settlement risk. The overnight settlement risk is the main risk component. For a seller (net short position) the Base Collateral covers overnight market risk and delivery risk, where the delivery risk is the main risk component.

The Base Collateral Call is initially calculated based upon an expected maximum daily overnight position and typically should cover a weekend (3 days). The calculation is run twice – once for the expected net long position and once for the expected net short position. The higher result from the two calculations is used by NOMXS as the final Base Collateral Requirement.

Expressed as a formula, the Base Collateral Call for an expected daily net long position is:

$$\text{Base Collateral long} = \text{daily overnight position net long} * \text{volatility long} * \text{day factor long}$$

Where;

daily overnight position net long is the max long position a participant may take for a single delivery day. To be decided by the participant and expressed in MWh

volatility long is the anticipated combined over-night risk expressed in £.

day factor long is a number to reflect the potential over-night risk during a weekend.

Similarly the Base Collateral Call for an expected daily short position is calculated as follows:

$$\text{Base Collateral short} = \text{daily overnight position net short} * \text{volatility short} * \text{day factor short}$$

The actual day factors ('minimum number of days') and the volatility parameters mentioned above could be found at: <http://www.n2ex.com/Clearing/riskmanagement/> ('parameters').

NOMXS reserves the right to increase a member's Base Collateral Requirement if in practice the self set limits are regularly exceeded.

3.4 Daily Overnight Position Exposure

Overnight risk functionality is implemented in the clearing system, and it is possible to follow-up on the overnight risk via a report in Condico Clearing Station ('Daily Overnight Position Exposure').

The daily overnight position exposure is compared with the individual member's Base Collateral entered in the clearing system and is expressed in £.

The daily overnight position exposure typically covers a short horizon in delivery days (a week end). The horizon is represented by the parameters 'day factor long' and 'day factor short' (the parameter 'min number of days'). The day factors are set on a global level and will change dynamically in advance of a 'long weekend'. The day factor will for example increase with 2 days on the Thursday before Easter and with 1 day on the day before Christmas Day and New Year's Eve.

The volatility parameters (long and short), expressed in £, represent the anticipated combined overnight risk for a buyer and a seller respectively. The parameters are set on a global level, and may be adjusted by the clearing house.

The daily overnight position exposure is calculated as follows over the horizon covered:

If there is a surplus in collateral (resulting from Margin summary calculations), then

$$\text{Actual exposure} = \text{abs}(\sum(\text{Net short position per delivery interval} * \text{volatility short}))$$

If there is a deficit in collateral (resulting from Margin summary calculations), then

$$\text{Actual exposure} = \text{abs}(\sum(\text{Net position per delivery interval} * \text{volatility long or short}))$$

The daily overnight position limits will change dynamically when parameters are adjusted, for example in advance of a long weekend, or due to an adjustment of the volatility parameters. In order to change the daily overnight position limits, the member must change its Base Collateral, by changing the Collateral amount and agree with the clearinghouse on changed limits.

Please note that the exposure refer to the converted value in £ for the entire horizon covered.

Positions are updated with trades, including DAM, intra-day. The exposure over the relevant days could be monitored by the member and the clearinghouse through the above mentioned dynamic report.

Alarm levels are set by the clearinghouse in order to facilitate the monitoring of the overnight risk. The Alarms levels are entered in % of the current absolute daily overnight position limit and are shown via the report.

The member is responsible for monitoring its usage of the limits and is expected to be aiming to trade within the limits. If a member repeatedly breaks its limit, the Clearing House may require an increase of the Base Collateral Call or issue an Extraordinary Margin Call.

Daily overnight positions, example:

Assume that the member has the following Daily overnight position exposure

- Daily overnight position exposure = £ 200 000,

On a given day, the member shall avoid having a position in MWh for the 3 delivery days ahead (base case), exceeding the position limits. *Please see the section 'Daily Follow-up and Default Handling' for further details.*

4 Margin Parameters

N2EX uses fixed margin parameters for the daily margin call calculations. These Margin Parameters are published daily in the corresponding risk reports and are also available in the Clearing/Risk Management section of the N2EX web page: <http://www.n2ex.com/Clearing/riskmanagement/>

Ordinarily changes to the Margin Parameters will be notified to the members via email and published on the web page with at least a couple of business days notice. Please note that NOMXS reserves the right to enact rapid changes to the Margin Parameters in the case of extraordinary circumstances. Such changes will receive a minimum of one (1) hour's notice as set out in the Clearing Rules.

5 Daily Margin Routine and Default Handling

The daily routines for follow-up of margins and payments as performed by the clearinghouse are summarized below:

End-of-day Margin Call and Invoices

At 8:00 in the morning the Margin Summary report becomes available in the Condicto Clearing Station. This report sets out the total Collateral Requirement based on the last end-of-day margin calculation and may also be used to track multiple other collateral elements - the current end-of-day margin call, reported collateral, including cash collateral and any deficit in collateral.

An overview of Invoices and self-billing invoices are also available in the 'Billing Summary' report.

Email notifications and Payments

NOMX will send to each affected participant, no later than 08:00 am UK Local Time an email containing any invoices resulting from the end of day processing performed the previous calendar day. Participants must issue a separate payment instruction for each invoice payable on the due date; netting of invoices to a single payment is not permissible. *Please See separate documentation covering Invoicing and Payments on the N2EX website for details.*

At 11:00 NOMXS checks that:

1. Payments regarding cash settlement due have been received into our account
2. Deficits in collateral outstanding from the Collateral Call in the morning are covered

Any Collateral requirement or Payment left outstanding is defined as a default event and the member is contacted immediately. The 'Clearing contact' and/or Collateral and Settlement contact' details supplied by the member in Annex 2 of the Clearing Membership Agreement will be used.

Intra-day Margin Call

The intra-day margin calculation is performed in order to reduce the overnight risk of NOMXS and permits adjustments to collaterals based upon activity in the day's Day Ahead Auction Market and the continuous market.

At 11:00 the intra-day margin calculation is run by NOMXS.

By 12:00 NOMXS will contact any member in collateral deficit following the intra-day margin calculation. NOMXS will provide to the member in question the relevant reports showing the result of the margin calculation and detail the resulting collateral requirement. Reports will be sent by email to the nominated contact.

Any deficit must be covered by 14:30. A failure to provide sufficient collateral at this time will be defined as a default event.

The intra-day margin can be monitored by the member in real-time through the intra-day Margin Summary report function. Please see the following screenshot:

Account	Currency	Delivery Margin	DM Position Netting	YM Position Netting	Billing Margin	Total Margin
_CA1	GBP	-14 907,93	-2 420,96	1 756,00		-15 572,89
_SA1	GBP				94 309,58	94 309,58
Totals	GBP	-14 907,93	-2 420,96	1 756,00	94 309,58	78 736,69

Currency	Cash Collateral	Guarantees/LOC	Daily Margin Call	Base Collateral Call	Extraordinary Margin Call	Collateral Call	Surplus/deficit Collateral
GBP	500 000,00	1 000 000,00	78 736,69	-1 000 000,00	0,00	-1 000 000,00	500 000,00

Margin Summary Report

Covering Margin Calls

A similar approach will apply to Extraordinary Margin Calls. All margin calls (daily, intraday and extraordinary) must be fulfilled by the participant increasing its cash collateral or Letter of Credit/Bank Guarantee; failure to increase collateral would invoke the default/suspension procedure. Margin calls cannot be satisfied by closing of positions unless at the direct request of NOMXS.

Default procedures

The default procedures are described in the Clearing Rules. Examples of a default event are: a failure to perform payment or to meet collateral within the applicable time limits set out in the Clearing Rules, or insolvency. A member in default will be contacted by NOMXS immediately.

Suspension Procedure

A default may lead to suspension, where NOMXS will no longer accept clearing transactions from the member with the exception of those used for close-out transactions approved by NOMXS. In case of a suspension NOMXS will send information to the member, market participants and brokers. NOMXS

will make its best endeavours to directly contact OTC Brokers. This will take place before the final suspension is carried out by NOMXS.

The steps performed by NOMXS in the suspension process are outlined below:

1. Contact the defaulting member to confirm their suspension; request participant withdraws any live bids or offers from Condico Trading and OTC Broker Cleared Instruments
2. Contact N2EX Clearing Operations and N2EX Trading Desk; withdraw immediately any bids and offers submitted by the participant on Sapri; prepare for suspension of participant in Condico Trading following receipt of formal announcement
3. Use best endeavors to contact OTC Brokers; advise of imminent suspension of participant and the publication of a formal suspension announcement; immediately process any outstanding voice trades for the member in question; withdrawal of live orders to be effective no later than on receipt of formal announcement
4. Send information to the Market and OTC Brokers via e-mail and web announcements. A minimum 5 minute grace period is granted from the first release of the Suspension Notice
5. When the grace period ends, NOMXS will suspend the member in all systems.
6. Suspend participant in Condico Clearing, inactivate suspended participant in Broker Gateway and suspend participant in Condico Trading.
7. Send further communication to Market and OTC Brokers via email and web announcement confirming suspension of participant; advise all participants to check regularly for cancelled trades in Condico Clearing
8. Contact all OTC Brokers to confirm suspension of participant and inactivation of suspended party in Gateway; request OTC Brokers remove any blocked trades in Gateway and to advise affected counterparties of trades that were rejected due to suspension of participant
9. Contact all affected participants as soon as practicable after suspension to advise of any trades accepted in the system but after the end of the grace period. These trades will be cancelled.

In the case of a Material Default event, NOMXS is permitted to act on behalf of the defaulting member to take the appropriate actions to minimise exposure. *Please see the Clearing Rules, available at the N2Ex website, for a complete overview of the default and insolvency procedures.*

Lifting of Suspension of a Participant

1. When NOMXS are satisfied that the suspension of a participant may be lifted, NOMXS will perform the steps outlined below:
2. Contact participant to advise suspension will be lifted following publication of formal announcement
3. Contact N2EX Clearing Operations and N2EX Trading Desk; advise suspension has been lifted
4. Contact Brokers to advise lifting of suspension of participant; request OTC Brokers to verify that trades blocked by gateway for the suspended participant have been removed before enabling participant to trade in Cleared Instruments.

5. OTC Brokers confirm removal of blocked trades
6. Activation of suspended party in Gateway
7. Contact N2EX Clearing operations and N2EX Trading operations; advise participant may submit bids and offers
8. Send communication to Market and OTC brokers via email and web announcements to notify lifting of suspension of participant

Follow-up on Overnight Positions

In addition to the follow-up on payments and collateral, the clearinghouse monitors the overnight risk via the daily overnight position exposure.

The Daily Overnight Position Exposure report in the Condico Clearing Station offers a snapshot of the individual member's overnight exposure. NOMXS will monitor this report in order to assess compliance with a member's initial Base Collateral prognosis. As stated in the section on Base Collaterals – NOMXS reserves the right to increase Base Collateral requirements for individual members where the estimation of Overnight Exposure is consistently exceeded. In that case NOMXS will provide to the member in question the relevant report ('snap shot') showing the current exposure.

A detailed description of the available reports is available at the N2EX web page (Condico Clearing Station User Guide).