

Introduction and Background

The NEX SEF is a Multilateral Trading Facility under MiFID II. Under MiFID II legislation (Directive 2014/65/EU ("MiFID II") and Regulation 600/2014 ("MiFIR")), and relevant secondary legislation including regulatory technical standards ("RTS"), in particular Commission Delegated Regulation (EU) 2017/584 ("RTS 7"), as retained in UK law under the European Union (Withdrawal) Act 2018, NEX SEF Limited ("the Operator") is required to have in place effective systems, procedures and arrangements to ensure the fair and orderly functioning of the markets that it operates.

This Annex describes the various arrangements the Operator has put in place to meet its obligations. Where relevant, further technical details of each arrangement are set out within the Operator's internal operational procedures.

Contents

Introduction and Background.....	2
1. Pre-Trade and Post-Trade Controls.....	3
1.1 Pre-Trade Controls.....	3
1.1.1 Price Controls.....	3
1.1.2 Value Controls.....	3
1.1.3 Messaging Controls.....	3
1.1.3.1 Order Throttling.....	3
1.1.3.2 Minimum Quote Life.....	4
1.1.3.3 Self-Match Prevention.....	4
1.2 Post-Trade Controls.....	4
1.2.1 Unexecuted Orders to Transactions Ratio.....	4
1.2.2 Messaging Efficiency Program.....	5
2. Volatility Interruptions.....	5
3. Testing Facilities.....	5
3.1 Overview.....	5
3.2 Fair Usage.....	6
4. Participant Due Diligence.....	6
5. Disorderly Trading Conditions.....	7
5.1 Overview.....	7
5.2 Disorderly Trading Conditions.....	7
5.3 Process Overview.....	7
5.3.1 Monitoring.....	7
5.3.2 Communication Protocol.....	8
5.3.3 Resumption of normal trading.....	8
5.3.4 Post-mortem.....	8
6. Kill Functionality.....	8
6.1 Overview.....	8

6.2 Participant Initiated.....	9
6.3 Market Operator Initiated.....	9
6.4 National Competent Authority Initiated.....	9
7. Suspension and removal of financial instruments from trading.....	9
7.1 Market Operator Initiated.....	9
7.2 National Competent Authority Initiated.....	10
8. Transparency waivers and deferrals.....	10
9. Business Clock Synchronisation.....	10

1. Pre-Trade and Post-Trade Controls

As per RTS 7 requirements, the NEX SEF governs the use of its electronic order systems with pre-trade controls on the price, volume and value of orders and order entry messaging thresholds, as well as post-trade controls.

1.1 Pre-Trade Controls

1.1.1 Price Controls

For iLink, NEX SEF maintains an allowable price range for a given order based on the most recent reference price. Orders submitted outside of the allowable price range are automatically rejected. On the EBS Workstation, participants can set additional price bands which can be clicked-through if necessary. Allowable price ranges are set out in the Reference Data API and in the CME Globex Product Reference available at [Client Systems Wiki - GCC Price Banding - EBS Market Price Banding](#).

1.1.2 Value Controls

NEX SEF validates order submissions prior to their release to the matching engine.

- Minimum and maximum order values are set per instrument and available in the Reference Data API and in the CME Globex Product Reference available at [Client Systems Wiki - GCC Price Banding - EBS Market Price Banding](#).
- Participants are able to configure maximum order size for each instrument across multiple GUS within the same GFID. Further details are available at [Client Systems Wiki - EBS Market on CME Globex - Maximum Order Size](#).

1.1.3 Messaging Controls

1.1.3.1 Order Throttling

- Orders can be rejected if more than a predefined number of messages are sent during a rolling window. If a Participant reaches an initial threshold, new messages are rejected. After a second threshold, the customer's connection is terminated. Messaging thresholds are explained and set out in the [Client Systems Wiki - Market Integrity Controls - Messaging Controls](#).

1.1.3.2 Minimum Quote Life

- A 'Minimum Quote Life' (MQL) is enforced for selected instruments / pairs and is applied to quotes submitted through iLink.
- MQL is designed to increase the likelihood of a viewed quote being available to trade and reduce hyper-active order book participation by implementing a minimum time limit before an order may be modified or cancelled. With MQL, a new order must rest for a pre-defined duration ("MQL timer") before it can be cancelled or modified. The length of time is defined for each instrument / pair individually and communicated via the Reference Data API and in the CME Globex Product Reference available at [Client Systems Wiki - GCC Price Banding - EBS Market Price Banding](#).
- Further details are available at [Client Systems Wiki - EBS Market on CME Globex - Minimum Quote Life](#).

1.1.3.3 Self-Match Prevention

- Through iLink, orders submitted using the same GFID and GUS can be submitted with different self-match prevention ("SMP") IDs and are able to Match. Orders submitted with the same SMP ID will not Match. SMP IDs can be created at a Participant level, and a single SMP ID can be assigned to multiple GFIDs. SMP applies on a per-Order basis on Globex.
- Further details are available at [Client Systems Wiki - EBS Market on CME Globex - Self Match Prevention](#).

1.2 Post-Trade Controls

1.2.1 Unexecuted Orders to Transactions Ratio

NEX SEF calculates the ratio of unexecuted orders to transaction entered into the system by each of its participants for every financial instrument traded at the end of every trading session in both volume terms and in number terms:

- Volume terms: (Total volume of orders/Total volume of transactions) - 1
- Number terms: (Total number of orders/Total number of transactions) - 1

Unexecuted orders to transaction ratios are monitored against the maximum thresholds, which have been determined taking into account the nature and liquidity of instruments on the NEX SEF and normal trading patterns.

Current thresholds are available at: [EBS Market on CME Globex Market Functionality - Market Integrity Controls - Unexecuted Order to Transaction Ratio](#)

The thresholds are subject to ongoing review and calibration.

1.2.2 Messaging Efficiency Program

The Messaging Efficiency Program (“MEP”) is designed to encourage responsible messaging practices and support the quality of quotes at top of book on selected NDF currency pairs on NEX SEF. Participants’ messaging activity is monitored on a monthly basis and the Operator may apply surcharges for those in breach of the MEP parameters.

Further details can be found in Rule 901(j) 7 of the NEX SEF Rulebook and relevant MRAN, available at [EBS Regulatory Documents](#).

2. Volatility Interruptions

Article 48(5) MiFID II requires regulated markets to be able to temporarily halt or constrain trading if there is a significant price movement during a short period of time in a financial instrument on that market or a related market.

NEX SEF will monitor for significant price movements during short periods of time. In the event a price movement exceeds either a pre-defined static or dynamic threshold in a specific instrument, NEX SEF will review and determine whether to introduce a trading halt.

3. Testing Facilities

3.1 Overview

All algorithmic participants trading on the NEX SEF are required, prior to trading in production, to test their algorithmic trading systems for both conformance to NEX SEF specifications as well as to ensure their trading systems will be able to handle, and not contribute to, disorderly trading conditions.

The NEX SEF testing environment is strictly separated from the production environment and is offered to participants, and prospective participants, on a scheduled basis to facilitate testing of their algorithms for conformance and for disorderly trading conditions.

Test conditions representative of production, as well as disorderly trading conditions are recreated in the testing environment using test symbols, a web facing testing application and replay injectors capable of replaying production-like messaging at various multiples of the original message rates. Within that environment, in addition to testing all aspects of conformance with NEX SEF specifications, participants can test their algorithms against a number of disorderly market conditions.

Algorithmic participants are required to certify that the algorithms they deploy have been tested to avoid contributing to or creating disorderly trading conditions. Algorithmic participants are required to certify or recertify their algorithms either (i) prior to deployment on the NEX SEF or (ii) prior to a substantial update to the trading algorithm or strategy. Algorithmic participants must provide this certification by completing the Algorithmic Trading Certification Form available via [CME Customer Center - User Help System - Algorithmic Trading](#).

3.2 Fair Usage

NEX SEF makes the testing environment available to participants and prospective participants for the purpose of conformance testing and to facilitate testing against disorderly trading conditions. There is no charge for the use of the testing facilities.

It is not intended that participants and prospective participants use the NEX SEF testing facilities to evaluate and iterate on the profitability of their trading models.

The NEX SEF reserves the right to restrict access to the testing facilities if usage is considered to be outside of expectations.

4. Participant Due Diligence

Prospective participants of the NEX SEF are required to meet the eligibility criteria and participant obligations set out in the NEX SEF Rulebook upon onboarding and on an on-going basis.

Upon onboarding, NEX SEF will undertake KYC/AML checks and participants are required to complete a participant questionnaire to enable NEX SEF to review and assess the arrangements the participant has in place to meet the rules of the NEX SEF.

In accordance with MiFID II, NEX SEF requires each participant and prospective participant to maintain adequate organisational procedures relating to:

- Pre-trade controls on price and value of orders
- Post-trade controls on credit/clearing and market risk
- Usage controls on message transmission via API
- Software development control and conformance testing to the NEX SEF

- Ability to cancel one or all live orders via use of kill functionality
- Qualified and experienced staff in key positions

NEX SEF conducts a periodic risk-based assessment of its participants to review whether participants continue to meet the participant obligations set out above and in the NEX SEF Rulebook.

5. Disorderly Trading Conditions

5.1 Overview

In accordance with MiFID II, NEX SEF has put in place arrangements to prevent disorderly trading including:

- Pre-trade controls on price and value of orders;
- Usage controls on message transmission via iLink;
- Unexecuted orders to transactions ratios;
- Mechanisms to manage volatility; and
- Kill functionality.

In the event of disorderly trading conditions, NEX SEF is required to notify the UK FCA, to inform participants that are subject to market making agreements that their obligations are suspended and to consider and communicate any further action to halt or constrain trading.

5.2 Disorderly Trading Conditions

The NEX SEF Rulebook defines disorderly trading conditions as a situation where the maintenance of fair, orderly and transparent execution of trades is compromised.

NEX SEF will consider a number of indicators to determine disorderly trading conditions including but not limited to the following:

- The price discovery process is interfered with over a significant period of time;
- The capacities of the NEX SEF's trading systems are reached or exceeded;
- Market makers and/or liquidity providers repeatedly claim mis-trades; and
- Failure of mechanisms designed to protect against the risk of algorithmic trading.

5.3 Process Overview

5.3.1 Monitoring

NEX SEF monitors in real-time order entry rates and significant processes for its trading systems. Automated alerts are distributed when thresholds are breached based on defined internal procedures.

5.3.2 Communication Protocol

Participants will be notified of disorderly trading conditions through the publication of a market-wide broadcast message.

Participants that have entered into a market making agreement with the Operator for the NEX SEF will be informed of the suspension of their obligations under their market making agreement until normal trading is resumed.

NEX SEF will notify the UK FCA of the disorderly trading conditions via email to the usual supervisory contact.

NEX SEF will consider and communicate any necessary additional measures such as trading halts or messaging restrictions.

5.3.3 Resumption of normal trading

Upon resumption of normal trading the communication protocol will be repeated and market making agreement obligations will apply to relevant participants.

5.3.4 Post-mortem

The appropriate internal teams conduct a post-mortem incident review for the NEX SEF management body to include the following points:

- Key findings
- Customer experience
- Process improvement

6. Kill Functionality

6.1 Overview

NEX SEF participants must be able to cancel immediately, as an emergency measure, any or all of their unexecuted orders by means of its kill functionality.

In accordance with RTS 7, NEX SEF operates a kill functionality to cancel unexecuted orders submitted by participants. Unexecuted orders may be cancelled at a single order level, at an instrument level or participant firm level.

NEX SEF's policy on the use of its kill functionality can be divided into three authorities:

1. Participant Initiated;
2. Market Operator (i.e. NEX SEF) Initiated; and
3. National Competent Authority Initiated

6.2 Participant Initiated

Participants may request the cancellation of unexecuted orders where the participant is technically unable to delete its own orders. Participants may call into Customer Support and request cancellation of one or many unexecuted orders.

Any such request must be made by an appropriately authorised individual and should include all necessary information relating to the orders to be cancelled.

Participants may be asked to provide further information relating to any technical failures that may have rendered their own kill functionality inoperable.

6.3 Market Operator Initiated

NEX SEF may use its kill functionality where required to preserve market integrity in the event of the order book containing erroneous duplicated orders or following a suspension initiated by a market operator or competent authority.

6.4 National Competent Authority Initiated

NEX SEF may use its kill functionality at the initiative of the UK FCA following an instrument suspension or further to an instruction to suspend a specific participant's access to the trading systems.

7. Suspension and removal of financial instruments from trading

NEX SEF may suspend or remove an instrument from trading, unless such a step would be likely to cause significant damage to the interest of investors or the orderly functioning of the market. Furthermore, the competent authority may demand the suspension of an instrument from trading on the NEX SEF.

7.1 Market Operator Initiated

NEX SEF may decide to suspend or remove an instrument from trading under certain conditions including but not limited to the following:

- An International Securities Identification Number (ISIN – ISO 6166) is no longer assigned to the instrument
- The instrument is no longer available for trading, for example under foreign exchange restrictions
- There is little or no liquidity in an instrument over a significant period of time
- The suspension or removal is unlikely to cause significant damage to investors' interest or the orderly functioning of the market
- If an instrument is suspended or removed, then any derivatives that reference that instrument will also be suspended or removed

NEX SEF may seek the views of participants and the UK FCA prior to suspending or removing an instrument in order to determine the potential for significant damage to investors' interests or the orderly functioning of the market including the potential to increase systemic risk or where continued availability of the instrument on the NEX SEF is necessary to perform critical post-trade risk management functions.

7.2 National Competent Authority Initiated

NEX SEF may be required to suspend or remove a specific instrument from trading upon notification from the UK FCA. In this event, the NEX SEF is also required to consider whether to extend the decision to include related derivatives or other instruments.

NEX SEF will communicate any instrument suspension or removal to participants through the appropriate channels.

8. Transparency waivers and deferrals

NEX SEF has been authorised by the UK FCA to make use of the following MiFID transparency waivers and deferrals:

- Pre-trade transparency waiver: Illiquid instrument (“ILQD”)
- Post-trade transparency deferral: Illiquid instrument (ILQD)

NEX SEF applies the illiquid instrument waiver to all orders entered into the system by its participants and defers the publication of the details of the transactions no later than 19.00 local time on the second working day after the date of the transaction (“T+2”).

9. Business Clock Synchronisation

NEX SEF and its participants are required to ensure that the business clocks they use to record the date and time of any reportable event are synchronised with the Coordinated Universal Time (UTC) issued and maintained by the timing centres listed in the latest Bureau International des Poids et Mesures.

NEX SEF adheres to the levels of accuracy set out below taking into account that the gateway-to-gateway latency time of its trading system is above 1 millisecond.

Gateway-to-gateway latency time of the trading system	Maximum divergence from UTC	Granularity of the timestamp
> 1 millisecond	1 millisecond	1 millisecond or better

Participants must ensure that their business clocks adhere to the level of accuracy prescribed in RTS 25 Annex Table 2, which is reproduced below.

Type of trading activity	Description	Maximum divergence from UTC	Granularity of the timestamp
Activity using high frequency algorithmic trading technique	High frequency algorithmic trading technique	100 microseconds	1 microsecond or better
Activity on voice trading systems	Voice trading systems as defined in Article 5(5) of Commission Delegated Regulation (EU) 2017/583	1 second	1 second or better
Activity on request for quote systems where the response requires human intervention or where the system does not allow algorithmic trading	Request for quotes systems as defined in Article 5(4) of Delegated Regulation (EU) 2017/583	1 second	1 second or better
Activity of concluding negotiated transactions	Negotiated transaction as set out in Article 4(1)(b) of Regulation (EU) No 600/2014.	1 second	1 second or better
Any other trading activity	All other trading activity not covered by this table.	1 millisecond	1 millisecond or better

