



Melissa Jurgens
Secretary of the Commission
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW
Washington, DC 20581

26 February 2014

Dear Ms. Jurgens:

Re: RIN No. 3038-AD52, Concept Release on Risk Controls and System Safeguards for Automated Trading Environments

LCH.Clearnet Group Limited ("LCH.Clearnet" or "The Group") is pleased to file a response to the request for comment on the Commodity Futures Trading Commission's ("the CFTC" or "Commission") Concept Release on Risk Controls and System Safeguards for Automated Trading Environments ("Concept Release").¹

LCH.Clearnet is the leading multi-asset class and multi-national clearing house, serving major international exchanges and platforms, as well as a range of OTC markets. It clears a broad range of asset classes including: securities, exchange traded derivatives, futures, commodities, energy, freight, foreign exchange, interest rate swaps, credit default swaps, and euro and sterling denominated bonds and repos. LCH.Clearnet works closely with market participants and exchanges to continually identify and develop clearing services for new asset classes.²

LCH.Clearnet is majority owned by London Stock Exchange Group (LSEG), a diversified international exchange group that sits at the heart of the world's financial community.³

¹ 78 FR 56542 (September 12, 2013).

² The Group consists of three operating subsidiaries: LCH.Clearnet Limited, LCH.Clearnet LLC, and LCH.Clearnet SA. LCH.Clearnet Limited is registered with the Commission as a DCO and is regulated as a Recognised Clearing House by the Bank of England. LCH.Clearnet Limited clears both swaps and futures under its DCO license. LCH.Clearnet LLC, domiciled in the US, is registered with the Commission as a DCO and clears swaps. LCH.Clearnet SA is registered with the Commission as a DCO and is regulated as a credit institution by a regulatory college of the market regulators and central banks of France, the Netherlands, Belgium and Portugal, and is regulated as a Recognised Overseas Clearing House by the Bank of England. LCH.Clearnet SA's CDS/Clear service clears swaps and security-based swaps. LCH.Clearnet Limited and LCH.Clearnet SA are subject to the European Markets Infrastructure Regulation ("EMIR") and have filed applications for reauthorization.

³ LSEG is headquartered in London, United Kingdom with significant operations in Europe, North America and Asia, and operates a broad range of international equity, fixed income and derivatives markets, including:

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The Commission issued the Concept Release in order to catalogue existing industry practices on risk controls and system safeguards for automated trading environments, determine the efficacy of these practices and their current level of implementation, and evaluate the need for additional measures, if any. The Concept Release poses questions on a wide variety of risk controls that are, or could be, employed by derivatives clearing organizations (“DCO”), designated contract markets (“DCMs”), swap execution facilities (“SEFs”), futures commission merchants, clearing members and other market participants. The Group’s letter responds to the questions that concern DCOs. Where possible, the Group also points the Commission to international discussions on similar issues, particularly in the European Union, in the interest of international consistency of markets regulation in a global context.

Question 1-3: High Frequency Trading (“HFT”)

In any rulemaking arising from this Concept Release, should the Commission adopt a formal definition of HFT? If so, what should the definition be and how should be applied for regulatory purposes?

The Group does not take a position on whether the Commission should adopt a formal definition of HFT. However, we note that in Europe a definition of “High Frequency Algorithmic Trading Technique” will shortly be introduced through the revised Markets in Financial Instruments legislative package (MiFID 2). MiFID 2 is expected to be published in the EU’s Official Journal and enter into force in late Q2 2014. The expected definition of “high frequency algorithmic trading technique” is as follows (MiFID Article 4(2)):

High frequency algorithmic trading technique means any algorithmic trading technique characterised by:

- (a) infrastructure intended to minimise network and other types of latencies, including at least one of the following facilities for algorithmic order entry: co-location, proximity hosting or high speed direct electronic access;
- (b) system determination of order initiation, generating, routing or execution without human intervention for individual trades or orders; and
- (c) high message intraday rates which constitute orders, quotes or cancellations.

London Stock Exchange; Borsa Italiana; MTS, and Turquoise; post trade and risk management, including CC&G, the Rome headquartered CCP and Monte Titoli, the European settlement business; and is majority owner of the leading multi-asset global CCP, LCH.Clearnet Group. LSEG operates the EMIR authorised trade repository, UnaVista, and offers an extensive range of real-time and reference data products, including Sedol, Proquote and RNS, as well as access to over 200,000 international equity, bond and alternative asset class indices, through the world leading index provider, FTSE International. LSEG is also a leading developer of high performance trading platforms and capital markets software. In addition to the Group’s own markets, over 30 other organisations and exchanges around the world use the Group’s MillenniumIT trading, surveillance and post trade technology.

This definition introduces certain requirements on investment firms that engage in algorithmic trading through high frequency algorithmic trading techniques as defined. For example:

- 1) MiFID 2 will require the authorization of those persons who use high frequency algorithmic trading techniques as an investment firm (and be subject to the requirements for investment firms under the legislation, including conduct of business rules) - even if those persons deal only on their own account and/or do not provide any other investment services and/or perform any other investment activities
- 2) An investment firm that engages in a high frequency trading technique will be required to store in an approved form an accurate and time sequenced records of all its placed orders, including cancellations of orders, executed orders and quotations on trading venues and regulators will be allowed to ask the firm to provide these on request.
- 3) A trading venue may be allowed by its regulators to impose a higher fee on participants placing a high ratio of cancelled orders to executed orders, and on those firms operating a high frequency algorithmic trading technique in order to reflect the additional burden on system capacity.

Question 6. Are there distinct pre-trade risk controls, including measures not listed below, or measures in addition to those already adopted by the Commission, that would be particularly helpful in protecting the financial integrity of a DCO?

LCH.Clearnet agrees that there are certain pre-trade risk controls that would protect the financial integrity of a DCO, and should be required by the Commission from SEFs/DCMs as a way of protecting against risks posed by automated trading systems ("ATSs") or other market participants.

LCH.Clearnet agrees with the types of pre-trade risk controls that the Commission suggests would be beneficial, specifically suggesting that the following would likely provide for the most protection to the DCO:

- Message and execution throttles -- to be set per SEF/DCM and per beneficial owner
- Maximum order sizes -- smaller trades that would exceed maximum order sizes if aggregated, should also be limited and captured
- Price collars -- scenarios where participants may want to purposely trade off market, outside of collars, such as to construct a hedge, should be considered in implementing this pre-trade risk control
- Volatility awareness alerts
- Trading pauses



SEFs/DCMs should be required to use fresh market data, as relevant, in the implementation of any of the above pre-trade risk controls. Controls should not be triggered by stale market data.

Each of these specific pre-trade risk controls seeks to limit the damage and monetary losses that could be caused by disruptive algorithms, and limits entities from executing orders that are misaligned with their risk tolerances. Without these controls, it is more likely that ATSS or other market participants may be able to execute trades on SEFs/DCMs that may not only be disruptive, but also potentially pose unacceptable risk to the financial integrity of the DCO.

Further, LCH.Clearnet believes that these controls should be required by the Commission for a SEF/DCM to submit trades to a DCO. We suggest this due to the critical nature of the relationship between the SEF/DCM and the DCO. The DCO is downstream from the SEF/DCM, and as such, the DCO may not necessarily become aware of a disruptive scenario in a timely enough manner to take any mitigating steps necessary to protect the integrity of its clearing operations. To protect the DCO, and foster greater certainty of clearing, the market should require SEFs/DCMs to have these protections in place, and reject disruptive orders before they become executed trades subject to clearing.

LCH.Clearnet also suggests that kill switches at the DCO may be particularly helpful to SEFs/DCMs. As LCH.Clearnet performs its own post-trade limit checks, where end-customer positions are managed in real-time against available limits, LCH.Clearnet may be in possession of information post-execution that the SEFs/DCMs may not. For instance, the DCO has information related to scenarios such as insolvency. Under these scenarios, information could be sent to SEF/DCMs to cease messaging.

Question 14. Would message and execution throttles provide additional protection in mitigating credit risk to DCOs?

LCH.Clearnet agrees that execution throttles may potentially reduce the damage and monetary losses caused by disruptive algorithms. Please see answer to question number 6.

Question 24. Would price collars provide additional protection in mitigating credit risk to DCOs?

LCH.Clearnet agrees that price collars may potentially provide additional protection in mitigating credit risk at the DCO. Please see answer to question number 6.

Question 34. What positions should be included in credit risk limit calculations in order to ensure that they are useful as a tool for limiting the activity of a malfunctioning ATS? Is it adequate for such a screen to include only those positions entered into by a particular ATS or should it include all the firm's positions?

In considering this question for ATSS, it may be helpful for the Commission to consider the information that a DCO considers in performing real-time post-trade risk calculations. LCH.Clearnet



performs real-time post-trade risk calculations by considering a position's incremental risk across an end-customer's entire portfolio. A full portfolio risk calculation provides a more accurate view of the amount of risk a participant may be introducing into a portfolio. This allows for offsets, where offsets are applicable, and allows the DCO to assess risk against all known positions.

Question 37. If credit checks are conducted post-trade, what should be done when a trade causes a firm to exceed a limit?

Consistent with LCH.Clearnet's stringent risk management standards, if the incremental risk of a trade exceeds the resources available to margin the trade, it will be rejected. This approach serves to protect the integrity of the DCO.

Question 42. What order and trade reports are currently offered by DCMs and DCOs? What aspects of those reports are most valuable or necessary for implementing risk safeguards? Please also indicate whether the report is included as part of the exchange or clearing service, or whether an extra fee must be paid.

While different LCH.Clearnet services currently offer different levels of reporting, all LCH.Clearnet services provide some or all of the following trade level reporting directly to Clients, Members and SEFs/DCMs.

For Members, we offer the following reports:

- Trade level status reports generated every five minutes which deliver: current trade status at LCH.Clearnet (registered, rejected, etc.); original SEF/DCM; trade details (notional, effective and maturity dates, etc.); and, party identification (LEIs and LCH.Clearnet Member IDs), trade level IDs (USI, execution venue ID, Client ID, LCH.Clearnet ID)
- Intraday trade level pricing reports generated at each curve update, and EOD reports which deliver: current NPV, pricing; accruals; trade details (notional, effective and maturity dates, etc.); and, party identification (LEIs and LCH.Clearnet Member IDs), trade level IDs (USI, execution venue ID, Client ID, LCH.Clearnet ID) for registered positions

In addition, LCH.Clearnet also reports obligations and cashflows directly to Members.

LCH.Clearnet further offers direct Client reporting which includes:

- Intraday trade level pricing reports generated at each curve update, and EOD reports which deliver: NPV; pricing; accruals; and, trade details (notional, effective and maturity dates, etc.), party identification (LEIs and LCH.Clearnet Member IDs), trade level IDs (USIs, execution venue ID, Client ID, LCH.Clearnet ID) for registered positions

LCH.Clearnet also reports the following information directly to SEFs/DCMs:

- Trade level real-time status reporting -- clearing confirmations/rejections



- End of day trade level summary reports -- current trade status at LCH.Clearnet (registered, rejected, etc.) trade details (notional, effective and maturity dates, etc.), party identification (LEIs and LCH.Clearnet Member IDs), trade level IDs (USI, Client ID, LCH.Clearnet ID)

Of these reports, the most critical information from a risk safeguard perspective, is clearing house trade status, which allows for a shared understanding of what has been cleared at the DCO, and further, in the case of trade level status reports, where there may be an issue (e.g. rejection due to insufficient limit). Trade economics – notional, currency, maturity – should also be deemed critical for participants who may look to reconcile position data directly with the DCO.

Reports for Members, Clients and SEFs/DCMs are part of the clearing service and there is not an additional charge for receiving these reports.

Question 43. If each order and trade report described above were to be standardized, please provide a detailed list of the appropriate content of the report, and how long after order receipt, order execution, or clearing the report should be delivered from the trading platform to the clearing member or other market participant.

LCH.Clearnet's suggestion is to standardize the information being delivered rather than the format. Since DCOs have already established data and reporting services which cover the types of data being described, industry participants have already integrated with these data services to consume the data they need. There is certainly a minimum data set that is required to be published, but the formats of reporting/data services should not be prescribed as they may already be well-entrenched in the markets. However, if the Commission should choose to require a standardized format, LCH.Clearnet suggests providing participants with sufficient lead time to resource and build to required specifications.

LCH.Clearnet recommends that each trade level report include the standardized information below:

1. Registration date and execution time
2. Parties -- LEIs for the Clearing Member, Client and execution venue
3. Trade Level IDs -- DCO internal ID, execution venue ID, Client ID and USI
4. Trade Level Details -- notional, effective and maturity dates, currency, product type, fixed rate and floating index
5. Execution Venue
6. Clearinghouse Trade Status

These reports, and the information within them, would be separate from other reports and information that is publicly available today, or sent directly to the Commission. Those reporting obligations should not change as it relates to these requirements.

Further, there is a core set of trade data that participants should receive as soon as technologically practicable – this would include trade status and core trade economics. Reporting under these timeframes requires extensive infrastructure and testing for both the sender and the receiver of the information. As such, any requirement for real time reporting of this information should be paired with a long lead time. Further, it should be noted that other information the DCO provides today, such as cashflow level and valuation data, is provided on a batch basis as it is used for periodic reconciliation rather than risk management activities. The reporting of this information should not change as it relates to these requirements.

As it relates to the market participants who should receive this information, we would suggest that Members, Clients and SEFs/DCMs continue to receive this as they do today. As it relates to reporting to SEFs/DCMs, we would expect that they would continue to only receive information on transactions where they were the original execution venue. Sending execution venues trade information on trades they were not party to raises confidentiality and proprietary concerns.

LCH.Clearnet would also like to suggest that SEF/DCM reporting directly to the DCO may also be useful as the DCO implements its own risk management policies and procedures. For instance, data on order activity and NPV at execution provides DCOs with general information on marketplace behavior which they would normally not have access to, or be able to consider, as part of their own risk management procedures.

LCH.Clearnet believes that the controls outlined above would help to mitigate any downstream effects of a malfunctioning ATS or other disruptive events or scenarios. Protecting the DCO may help to foster greater certainty of clearing, reduce operational risks for customers and ultimately protect the financial integrity of the DCO.

Question 59. Should basic crisis management procedures be standardized across market participants? If so, what elements should be addressed in an industry-wide standard?

Certain crisis management procedures should be standardized such as the requirement to notify the Commission and market participants in situations in which an ATS is aware of circumstances that may be disruptive to market participants or would risk the financial integrity of the DCO clearing for the ATS. If the Commission chooses to require kill switches, there should be standard criteria that apply to all ATSs on the circumstances under which kill switches must be triggered.

Question 60. Are there specific core requirements that should be included in any crisis management procedures? Similarly, are there specific types of crisis events that should be addressed in any crisis management procedures? If so, please identify such requirements and/or crisis events and the level of granularity or specificity that the procedures should have with respect to each.

As LCH.Clearnet noted in the response to Question 59, notifications to the Commission and to market participants should be required as part of crisis management procedures, and should apply to any events that are disruptive to, or would risk the financial integrity of the DCO.

Questions 68-73. ATS or algorithm identification

As set out in our response to questions 1-3, the European Union will introduce a definition of “high frequency algorithmic trading technique” in MiFID 2. This definition is a subset of the definition of “algorithmic trading” which will also be introduced through MiFID 2 (Article 4(2)):

“Algorithmic trading” means trading in financial instruments where a computer algorithm automatically determines individual parameters of orders such as whether to initiate the order, the timing, price or quantity of the order or how to manage the order after its submission, with limited or no human intervention. This definition does not include any system that is only used for the purpose of routing orders to one or more trading venues or for the processing of orders involving no determination of any trading parameters or for the confirmation of orders or the post-trade processing of executed transactions

In addition, MiFID 2 will introduce certain requirements on investment firms that engage in algorithmic trading as defined. For example, an investment firm that engages in algorithmic trading must:

- 1) have in place effective systems and risk controls suitable to the business it operates to ensure that its trading systems are resilient and have sufficient capacity, are subject to appropriate trading thresholds and limits and prevent the sending of erroneous orders or the system otherwise functioning in a way that may create or contribute to a disorderly market.
- 2) notify its use of algorithmic trading to the competent authorities of its Home Member State and of the trading venues at which the investment firm as a member or participant of the trading venue is engaged in algorithmic trading. The competent authority may require the investment firm to provide, on a regular or ad-hoc basis, a description of the nature of its algorithmic trading strategies, details of the trading parameters or limits to which the system is subject, the key compliance and risk controls that it has in place and details of the testing of its systems.
- 3) Further, if the firm engages in algorithmic trading to pursue a market making strategy, it needs to meet certain requirements. For example, it is required to carry out this market making continuously during a specified proportion of the trading venue’s trading hours, except under exceptional circumstances (with the result of providing liquidity on a regular and predictable basis). It also needs to enter into a binding written agreement with that trading venue, which shall at least specify the obligations of the investment firm under the market making agreement. The firm also must have in place effective systems to ensure that it fulfils its obligations under the agreement at all times.

Furthermore, Article 51 of MiFID 2 will introduce obligations on trading venues pertaining to the use of algorithmic trading by its members. For example, venues will be required to:

- 1) require members or participants to carry out appropriate testing of algorithms and providing environments to facilitate such testing, to ensure that algorithmic trading systems cannot create or contribute to disorderly trading conditions on the market and to manage any disorderly trading conditions which do arise from such algorithmic trading systems.



- 2) identify, by means of flagging from members or participants, orders generated by algorithmic trading, the different algorithms used for the creation of orders and the relevant persons initiating these orders.

LCH.Clearnet appreciates the additional opportunity to share our views on the Commission's Concept Release. Please do not hesitate to contact me at +44 20 7426 7541 if you have any questions or wish to discuss these comments in greater detail.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'Lisa Rosen', with a long, sweeping flourish extending to the right.

Lisa Rosen
Group Head of Compliance and Public Affairs