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## CFTC Publishes Sweeping Concept Release Asking Questions About Additional Regulation of Automated Trading Strategies and High Frequency Trading

n September 12, 2013, the Commodity Futures Trading Commission (CFTC) published a concept release (Concept Release or Release) requesting information about current market practices relating to the use of automated trading systems (ATSs), including high-frequency trading (HFT) strategies. The Release also solicits feedback on possible regulations that would have a direct impact on a wide variety of market participants, including futures exchanges (*i.e.*, designated contract markets or DCMs) and swap execution facilities (SEFs), swap dealers (SDs) and major swap participants (MSPs), futures commission merchants (FCMs), commodity pool operators and commodity trading advisors (CTAs), unregistered proprietary traders and software firms providing ATS-related algorithms.<sup>1</sup>

The Concept Release contains little in the way of substantive discussion or analysis, but instead asks for commenters to respond to 124 different questions by December 11, 2013. Below we have summarized the topics addressed in the Concept Release, and highlighted the key questions for each such topic. A full list of the questions asked in the Concept Release can be found here.

#### **Pre-Trade Risk Controls**

The Concept Release broadly categorizes pre-trade risk controls as the policies of each individual firm, CFTC-registered intermediary, MSP, SD, DCM and SEF that seeks to protect against the submission of a large volume of orders, executions or positions over an abbreviated period of time. Within this category, the Concept Release specifically requests comment on the following types of pre-trade risk controls:

## Message and Execution Throttles

The Release explains an "execution throttle" as a control that, as employed by individual firms, generally prevents an algorithm from exceeding its expected message rate or rate of execution or, as employed by exchanges, generally limits the rate of transmission of an algorithm's orders to the exchange's order book.

Question summary: The Release asks for further information about execution throttles currently used by market participants and whether the use of such controls would be appropriate at FCMs and clearing firms as well as individual firms and exchanges.

## Volatility Awareness Alert

The Release explains "volatility awareness alerts" as automated systems that alert human monitors to the presence of market conditions that may exceed or disrupt the parameters within which ATS or HFT algorithms are programmed to operate.

*Question summary:* The Release asks for ideas as to how false positives can be minimized for volatility awareness alerts.

<sup>1</sup> Concept Release on Risk Controls and System Safeguards for Automated Trading Environments, 78 Fed. Reg. 56542 (Sept. 12, 2013).

#### Self-Trade Controls

The Release identifies "self-trade controls" as functionality that will prevent the matching of opposing orders from a single firm or from two or more commonly controlled accounts.

Question summary: The Release asks commenters to provide specific details about existing self-trading controls and about whether such controls should be mandatory at the exchange-level or trader-level.

#### Price Collars

The Release identifies "price collars" as limits imposed on orders priced outside of an acceptable price range and recognizes that price collars can be imposed on orders (preventing orders outside of such limits from entering the order book) or on executions (preventing an order in the order book from being executed by the matching engine).

Question summary: The Release asks whether an exchange should impose price collars on each of its listed contracts.

#### Maximum Order Sizes

The Release recognizes that "maximum order sizes" can function at the firm level, clearing level or exchange level.

Question summary: The Release asks for further information on the scope of applicability of maximum order sizes, whether such controls are used in pre-trade screening of orders, and whether additional standardization and more uniform application would improve the effectiveness of such controls.

## Trading Pauses

The Release acknowledges the existing use of a variety of "trading pause" methodologies by exchanges.

Question summary: The Release asks whether some triggers for trading pauses are more effective than others, what factors should be considered in determining triggers for trading pauses, and how markets should be re-opened after trading pauses.

#### Credit Risk Limits

The Release acknowledges that "credit risk limits" are already required of certain registrants pursuant to Rules 1.73 (applicable to FCMs) and 23.609 (applicable to SDs), and such limits could be implemented by trading firms, derivatives clearing organizations (DCOs) and exchanges, as well. The Concept Release also recognizes that the CFTC's Technology Advisory Committee (TAC) has received proposed models for implementing pre-trade credit risk controls for swaps.

Question summary: The Release generally asks about the application of credit risk limits as a mechanism for limiting the disruptive activity of a malfunctioning ATS and how such limits should be implemented. Specifically, the Concept Release inquires about how the "hub" model (as proposed to the TAC) could be applied to futures markets.

#### **Post-Trade Risk Controls**

The Concept Release recognizes that post-trade risk controls, used in conjunction with pre-trade risk controls, may yield additional benefits in mitigating the effects of unexpected feedback loops and malfunctioning pre-trade risk controls. Within this category, the Concept Release specifically requests comment on the following types of post-trade risk controls:

## Order, Trade and Position Drop Copy

The Release explains drop copy as a report (or a service generating such report) that provides a trader with summaries of its trading activity, related messaging and other information (*e.g.*, order state changes, modifications, rejections and cancellations) in as close to real-time as possible.

Question summary: The Release asks whether the CFTC should require all exchanges and DCOs to make standardized real-time order and trade reports available to each trader (and to each trader's clearing firm), and if so, what the content of any such standardized report should be.

## Trade Cancellation or Adjustment Policies

The Release recognizes that exchanges have existing trade cancellation or adjustment policies, and contemplates that any regulatory policies could require traders to provide notice of any error trade within a specified number of minutes and exchanges to provide notice of an adjusted or busted trade immediately.

Question summary: The Release asks whether the CFTC should develop more uniform and objective trade cancellation policies (e.g., making exchanges determine to cancel or adjust a trade within a specified amount of time after an error trade is reported) and asks whether exchanges should have discretion to determine the criteria by which to adjust or cancel a trade. The Concept Release also asks whether trade cancellation or adjustment policies should be consistent across exchanges.

## System Safeguards

The Concept Release generally describes "system safeguards" as the range of systems that are intended to address a number of operational, market abuse and transmission risks, and that may protect against potential disruptions and abuses that are unique to electronic trading. Within this category, the Concept Release specifically requests comment on the following types of system safeguards:

#### Controls Related to Order Placement

The Concept Release divides "controls related to order placement" into two broad categories: "order cancellation capabilities" and "repeated automated execution throttle." Order cancellation capabilities include "kill switches" and other similar procedures (e.g., autocancel a firm's working orders if the firm loses its connectivity with the exchange). The Concept Release explains "repeated automated execution throttle" as a type of protection that disables an ATS whose execution levels exceed a predetermined threshold, and the ATS would remain disabled until a human verifies that the ATS is appropriately responding to market conditions and re-enables it.

Question summary: The Release generally requests further information about both categories of controls related to order placement, and specifically asks many detailed questions about kill switches, including whether kill switch capabilities should be required of FCMs, exchanges and all traders that operate an ATS.

## Policies and Procedures for the Design, Testing and Supervision of ATSs

The Release groups together a number of policies and procedures that collectively establish the standards for a firm operation of an ATS. The Release recognizes that existing Rule 23.600(d)(9) requires that SDs and MSPs have written procedures governing their use, supervision, maintenance, testing and inspection of any trading program, but no similar requirement applies to FCMs or trading firms.

Question summary: The Release requests more information about policies and procedures that firms use to test, monitor and supervise their ATSs and any crisis management procedures that are in place. The Concept Release also inquires whether the CFTC should prescribe minimum standards for policies and procedures concerning ATS testing, monitoring, supervision and crisis management.

#### Self-Certifications and Notifications

The Release discusses the possibility of making each market participant that operates an ATS and its FCM(s) periodically self-certify that its pre-trade risk controls, post-trade risk controls and other system safeguards meet applicable standards.

Question summary: The Release asks how frequently such self-certifications should be submitted, to whom (*i.e.*, other market participants, FCMs, applicable self-regulatory organizations and/or the CFTC) and by whom (*i.e.*, a CEO, CCO or other similar officer).

## ATS or Algorithm Identification

The Release asks whether the CFTC should adopt a definition of "ATS" and "algorithm" (and possibly "HFT") to be used for the purpose of identifying whether an order has originated from an ATS or an algorithm.

Question summary: The Release asks about how "ATS," "algorithm" and "HFT" should be defined, whether market participants already have existing criteria by which to identify ATSs or algorithms, and how identifications should be assigned (e.g., if ATSs consist of numerous algorithms, which should carry the ID).

## Data Reasonability Checks

The Concept Release acknowledges that ATSs pull information from a range of sources to inform their trading decisions.

Question summary: The Release requests information on how ATSs currently use market data, general news and other information, as well as on the types of risk controls and reasonability checks that ATSs already have in place.

#### **Other Protections**

The Concept Release also discusses under the banner of "other protections" a number of potentially significant changes to the registration status of market participants using ATSs or HFTs and to the data required from CFTC-regulated trading platforms.

## Registration of Firms Operating ATSs

The Release suggests that firms operating ATSs register with the CFTC as "floor brokers" (FBs) and contemplates the registration of software firms that provide algorithms.

Question summary: The Release asks whether FB is the most appropriate registration category, what indicia should trigger a registration requirement, whether HFT firms should have a different registration category and whether (and under what authority) the CFTC should require software firms to register. The Concept Release also asks whether trading venues should be required to "apply mandatory functionalities across derivatives markets," and whether such application would obviate the need for firms operating ATS or HFT to register with the CFTC.

## Market Quality Data

The Release suggests that the CFTC is inclined to require each trading platform to provide "market quality indicators" for each product that is traded on such platform at a regular frequency. The list of market indicators for each product would include measures of: (1) effective spreads, (2) order-to-fill ratios, (3) execution speeds by order type and order size, (4) average aggressiveness imbalances, (5) price impact for given trade sizes, (6) average order duration, (7) order efficiency, (8) rejection order ratios, (9) net position changes versus volume, (10) branching ratios, (11) volume imbalance and trade intensity, (12) Herfindahl-Hirshchman Indexes based on the market share of open positions under common control, and (13) metrics on the number of price changing trades involving ATS.

*Question summary*: The Release requests information on any similar metrics that are presently used by trading platforms and seeks comments on whether the metrics discussed in the Concept Release would be effective in enhancing the reliability and risk management of ATSs.

#### Market Incentives

The Release notes that researchers and market participants have suggested various methods for incentivizing ATSs and HFT strategies to engage in trading strategies that are viewed as more beneficial to efficient price discovery. The Release cites six recommendations: (1) utilizing a trade allocation formula that is an intermediate between a cardinal ranking (time-weighted), *pro rata* allocation formula and a price/time allocation formula; (2) creating a new limit order type that would prioritize orders that remain resting in the order book for a minimum time; (3) requiring orders that are not fully visible in the order book to go to the end of the queue (within limit price) with respect to trade allocation; (4) aggregating multiple small orders from the same legal entity entered contemporaneously at the same price level and assigning them the lowest priority time stamp; (5) requiring exchanges to use batch auctions once per half-second at random times rather than using continuous trade matching; and (7) limiting visibility into the order book to aggregate size available at a limit price.

Question summary: The Release generally inquires about the merits of the six recommendations.

## Policies and Procedures to Identify "Related Contracts"

The Release recognizes that the existing guidance in Appendix B to Part 38 of the CFTC's rules provides specific guidance concerning a designated contract market's risk controls for trading with respect to related contracts, which requires the DCM to coordinate with other DCMs and national securities exchanges, as practicable.

Question summary: The Release asks DCMs to comment on their current practices for identifying related contracts and coordinating risk controls with other DCMs and national securities exchanges, and asks whether exchanges should develop and document policies and procedures for regularly reviewing contracts on other exchanges that could be related.

## Standardize and Simplify Order Types

The Release acknowledges the proliferation of order types (citing to a November 2012 report that BATS Global Markets listed more than 2,000 order types) leads to complex testing scenarios and postulates that a consolidation of order types may reduce the potential for instability.

Question summary: The Release asks whether consolidation of order types would reduce the potential for instability, and if so, who should review existing order types and make recommendations for consolidation (*i.e.*, the CFTC, trading platforms or some other entities).