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# Futures and Derivatives Alert

## CFTC Proposes “Regulation AT” for Automated Trading

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### I. Executive Summary

On November 24, 2015, the Commodity Futures Trading Commission (CFTC or Commission) proposed a new regulatory regime for automated trading on US designated contract markets (DCM) (Regulation AT or the proposal).<sup>1</sup> The Commission describes the proposal as “a comprehensive approach to reducing risk and increasing transparency in automated trading.”<sup>2</sup> Regulation AT would impose a series of risk controls and other regulatory requirements on several layers of market participants: (a) market participants meeting the definition of an “AT Person” (defined below); (b) clearing member futures commission merchants (clearing member FCM) whose customers are AT Persons; and (c) DCMs executing orders from AT Persons. According to the Commission, the proposal enshrines many of the best practices already adopted by industry and generally takes a principles-based approach to risk control requirements and other measures.

**AT Persons.** AT Persons would be required to implement pre-trade and other risk controls on the Algorithmic Trading (defined below) orders they initiate, such as maximum order message and execution rates, order price and maximum order size parameters, and order cancellation systems. AT Persons would also be required to implement development, testing and supervision standards and to submit compliance reports to DCMs regarding the new risk controls. Any person with direct electronic access (DEA) to a DCM that engages in Algorithmic Trading and that is not already registered with the Commission would be required to register as a floor trader. Further, all AT Persons would be required to become members of at least one registered futures association—currently this means the National Futures Association (NFA).

**FCMs.** Clearing member FCMs that have customers that are AT Persons would be required to impose the same types of pre-trade risk controls as AT Persons. For orders submitted to the DCM through DEA, the FCM must implement DCM-provided risk controls (similar to how customers’ financial risk is managed by the FCM through the DCM). For non-DEA orders, the clearing member FCMs must establish the risk controls themselves.

**DCMs.** DCMs would be required to establish pre-trade and other risk controls, for all orders. The proposal also would require DCMs to disclose specified information related to a DCM’s trade matching systems and market-maker and trading incentive programs. The proposal further would require DCMs to implement programs to prevent self-trading and publish information about self-trading that occurs on their platforms.

The proposal provides AT Persons, FCMs and DCMs with flexibility in determining the design and calibration of the pre-trade risk controls. For example, AT Persons, FCMs that clear for AT Persons, and DCMs that execute orders for AT Persons are permitted to set applicable trading controls required under the rules at the AT Person or more granular level if necessary.

A controversial provision in the proposal would require each AT Person to maintain a repository of all of its source code, including algorithms, and make the information therein available to any representative of the Commission or the US Department of Justice (DOJ) upon request. Currently, the contexts in which the CFTC may obtain such information are more limited. Often the conditions under which that information is released and held are subject to negotiation.

The proposal includes a description of the Commission's 2013 Concept Release on Risk Controls and System Safeguards for Automated Trading Environments (Concept Release) and comments received in response, catalogues industry "best practices" related to Algorithmic Trading, surveys regulatory requirements related to Algorithmic Trading in other jurisdictions, discusses the costs and benefits of the proposal, and poses 164 questions related to the provisions.

## II. Background

The Commission's proposal represents its first comprehensive regulatory response to the ascendancy of electronic trading as the predominant method of trading as well as to a number of high-profile market disruptions in the derivatives and securities markets involving automated trading systems. The Commission stated: "As an overarching goal, the Commission seeks to update Commission rules in response to the evolution from pit trading to electronic trading."<sup>3</sup> The Commission highlighted several incidents that occurred domestically and abroad "that illustrate the technological and operational vulnerabilities inherent to automated trading environments."<sup>4</sup>

The Commission previously had responded to these developments through several specific regulatory measures<sup>5</sup> and in 2013 it published a Concept Release requesting comment on a variety of potential additional risk controls and other measures.<sup>6</sup> In addition to relying on responses to the Concept Release to develop Regulation AT, in developing this proposal the Commission studied the "best practices" for automated trading from the NFA, the Futures Industry Association (FIA), the European Securities Market Authority (ESMA), and the International Organization of Securities Commissions (IOSCO), among others.<sup>7</sup> The Commission also looked to other federal agency action in this area including from the Securities and Exchange Commission (SEC), the Financial Industry Regulatory Authority (FINRA) and European regulators.<sup>8</sup>

## III. Definitions: Algorithmic Trading and AT Person

The proposal defines several new terms used throughout the rulemaking.

**Algorithmic Trading.** An entity is engaging in "Algorithmic Trading" when (1) it has computer algorithms or systems determine whether to initiate, modify, or cancel an order, or make other "determinations" regarding an order<sup>9</sup> and (2) the order, modification, or cancellation is electronically submitted to a DCM. Exempted from this definition is any "order, modification, or order cancellation whose every parameter or attribute is manually entered into a front-end system by a natural person, with no further discretion by any computer system or algorithm, prior to its electronic submission" to a DCM.<sup>10</sup>

The Commission's proposal does not define "high-frequency trading," and instead "focus[es] on automation of order origination, transmission and execution. . ." by defining the term "Algorithmic Trading."<sup>11</sup> The Commission also stated it is considering expanding the definition of Algorithmic Trading "to encompass orders that are generated using algorithmic methods (e.g., an algorithm generates a buy or sell signal at a particular time), but are then manually entered into a front-end

system by a natural person, who determines all aspects of the routing of the orders.” The Commission believes that although such orders would fall outside of the current definition, they “have the potential to cause market disruptions.”<sup>12</sup> The Commission requested comment on this possible expanded definition.

**AT Person.** An AT Person is any person who is: (1) registered with the Commission and engaging in “Algorithmic Trading”; or (2) any person who is not registered with the Commission, but uses DEA<sup>13</sup> to a DCM to engage in proprietary trading using futures, swaps or commodity options.<sup>14</sup> Persons that are not registered with the CFTC and do not have DEA to a DCM would not be considered AT Persons even if they are engaging in Algorithmic Trading. The Commission estimated that there are approximately 100 proprietary trading firms engaged in Algorithmic Trading in CFTC-regulated markets.<sup>15</sup> As a potential alternative approach, the Commission requested comment on whether the AT Person definition should instead be limited to only persons using DEA.<sup>16</sup>

#### IV. AT Person Requirements

##### A. Registration

Persons not already registered with the CFTC and who meet the definition of AT Person would be required to register as floor traders with the NFA.<sup>17</sup>

##### B. Pre-Trade Risk Controls and Other Measures

For orders executed through Algorithmic Trading, AT Persons would be required to implement pre-trade risk controls and other measures, to submit an annual report on their compliance with those controls, to follow certain rules for developing and testing their Algorithmic Trading systems (ATS), and to monitor their ATSS.

The pre-trade risk controls must include: (A) maximum AT Order Message<sup>18</sup> rate and maximum execution rate (*i.e.*, “message and execution throttles”); and (B) order price parameters and maximum order size limits (*i.e.*, “fat-finger limits”).<sup>19</sup> The pre-trade risk controls must be set at the level of each AT Person, or such other more granular level as the AT Person may determine.<sup>20</sup> The Commission described these requirements as “generally limited to risk controls identified as best practices by FIA in 2015.”<sup>21</sup> The regulation allows AT Persons flexibility to determine the particular thresholds that are appropriate for their particular Algorithmic Trading.

AT persons are also required to implement the following other measures on their systems:

- **order cancellation systems** that provide the ability to immediately disengage Algorithmic Trading (*i.e.*, “kill switches”), cancel selected or all resting orders when market conditions require it, and prevent submission of new AT Order Messages;<sup>22</sup>
- **system connectivity** systems to indicate whether an AT Person with DEA has proper connectivity with the trading platform on an ongoing basis;
- **notification of Algorithmic Trading** to DCMs and FCMs that the AT Person will engage in Algorithmic Trading;
- **self-Trade Prevention Tools**; and
- **periodic reviews of such controls**, including taking prompt action to remedy any deficiencies identified.<sup>23</sup>

##### C. Development and Testing; Source Code Repositories

The proposal would require AT Persons to implement policies and procedures for the development and testing of ATSS to provide:

- **a development environment** that is isolated from the production trading environment;
- **testing** of all Algorithmic Trading code and related systems and any changes to such code and systems prior to their implementation;
- **regular back-testing** of Algorithmic Trading using historical data;
- **regular stress tests**;
- **documenting the strategy and design of proprietary Algorithmic Trading software**, as well as changes to such software; and
- **maintenance of a source code repository.**<sup>24</sup>

**Source Code Repository.** The proposal would require AT Persons to maintain “a source code repository to manage source code access, persistence, copies of all code used in the production environment, and changes to such code.”<sup>25</sup> The source code repository must be maintained in accordance with the current recordkeeping obligations under Regulation 1.31. Under Regulation 1.31, an AT Person would be required to make all of the information in the source code repository available to any representative of the Commission or the DOJ upon request.<sup>26</sup>

The source code repository provision already has generated some controversy.<sup>27</sup> There is concern that it would provide the CFTC and the DOJ with access to proprietary source code information simply upon request. There is concern that the CFTC will not be able to protect the confidentiality of this information, as well as concern that the diffusion of knowledge about proprietary trading strategies will compromise the effectiveness of those strategies. In a statement accompanying the rule, Commissioner J. Christopher Giancarlo wrote that (1) there seems to be no other precedent for this type of “easy access” at any other federal agency (he likened it to the FDA having the authority to get Coca-Cola’s secret recipe); (2) it is not clear if the CFTC has the ability to analyze this type of source code; and (3) it would be devastating to a firm if this information was somehow compromised.<sup>28</sup> Commissioner Giancarlo recommended as an alternative “allowing AT Persons to keep source code repositories in accordance with their own reasonable and secure internal recordkeeping procedures.”<sup>29</sup> In contrast, Chairman Timothy G. Massad supported the proposal, maintaining that the CFTC routinely handles and protects highly sensitive information, and that the CFTC’s Division of Enforcement is capable of analyzing algorithms and protecting their confidentiality.

#### **D. Monitoring, Compliance and Training**

**Monitoring.** The Proposal would require AT Persons to implement policies and procedures for the monitoring of ATs. Such policies and procedures must provide:

- **continuous real-time monitoring** by knowledgeable and qualified staff;
- **automated alerts** when the ATS breaches design parameters, loses network connectivity, or market conditions exceed boundaries of the operating system; and
- **that monitoring staff** must have the ability to disengage an ATS and cancel resting orders when market conditions so require.<sup>30</sup>

**Compliance.** AT Persons also would be required to establish policies and procedures for reviewing ATs to detect compliance issues,<sup>31</sup> and to ensure that AT Person staff are familiar with the requirements of the CEA, the Commission’s regulations, the regulations of the applicable exchanges, the requirements of the AT Person’s FCM, as applicable, and the AT Person’s own requirements. AT Persons also would be required to develop a plan of internal coordination and communication between compliance staff and staff responsible for Algorithmic Trading regarding Algorithmic Trading design changes, testing and controls. The plan should be designed to detect and prevent Algorithmic Trading Compliance Issues.<sup>32</sup>

**Testing.** The Proposal would require AT Persons to designate and train all staff involved in designing, testing and monitoring Algorithmic Trading and documenting training events.<sup>33</sup>

## E. Periodic Reviews and Annual Reports

**Periodic Reviews.** AT Persons would be required to periodically review the risk controls and other measures it has implemented pursuant to the proposed rule to determine whether it has “effectively implemented sufficient measures reasonably designed to prevent an Algorithmic Trading Event,”<sup>34</sup> and promptly remediate any deficiencies identified.<sup>35</sup> AT Persons also would be required to periodically review the effectiveness of the policies and procedures established to meet the development, monitoring, compliance and testing requirements in the rule, and to take prompt action to remedy any deficiencies in such policies and procedures.

**Annual Reports.** AT Persons would be required to prepare, certify and submit annual reports to the DCMs on which the AT Person engages in Algorithmic Trading.<sup>36</sup> This rule would be complemented by a new rule (discussed in more detail below) requiring DCMs to establish programs to review and evaluate such reports. The rule would require reports to be submitted annually by June 30 and to include:

- descriptions of the AT Person’s pre-trade risk controls;
- copies of the AT Person’s written policies and procedures for the development and testing of ATs and the compliance of the ATs with the CEA; and
- certification by the chief executive officer or chief compliance officer of the AT Person that the report is accurate and complete.<sup>37</sup>

Regulation AT would also require AT Persons to keep and provide upon request to DCMs books and records regarding their compliance with Regulation AT. DCMs would be required to review and evaluate, as necessary, books and records maintained by AT Persons and clearing member FCMs regarding their compliance with requirements discussed above.

## V. Clearing Member FCM Requirements

Regulation AT would apply to FCMs either when trading for their proprietary account as AT Persons, or when acting as clearing members for their clearing customers that are AT Persons.<sup>38</sup> Clearing member FCMs would generally be responsible for making use of the pre-trade risk controls and order cancellation systems described above, to prevent or mitigate an Algorithmic Trading Disruption.<sup>39</sup> However, these controls and systems would be implemented differently, depending on how the FCM customer that is an AT Person accesses the market.

**DEA Orders.** With respect to AT Persons that submit orders through DEA, the pre-trade and other risk controls “would be established by and located at the DCM, and be controlled or calibrated by the clearing member FCM.”<sup>40</sup>

**Non-DEA Orders.** For all other Algorithmic Trading orders originating with an AT Person, the clearing member FCM shall establish itself the pre-trade risk controls and order cancellation systems that are applicable to the AT Person.<sup>41</sup>

Notably, the Commission is considering expanding the application of the proposal to require clearing member FCMs to implement controls with respect to all orders, including those that are manually submitted or are entered through algorithmic methods that nonetheless do not meet the definition of Algorithmic Trading.<sup>42</sup> The Commission has requested comment on this potential change.

**Annual Reports.** Clearing member FCMs for one or more AT Persons would be required to prepare, certify and submit annual reports regarding its program for establishing and maintaining controls for its AT Persons in the aggregate.<sup>43</sup> Like AT Persons, FCMs would be required to submit a certification by the chief executive officer or chief compliance officer of the FCM that the report is accurate and complete.<sup>44</sup> Regulation AT would also require clearing member FCMs to keep and

provide upon request to DCMs books and records regarding their compliance with Regulation AT.<sup>45</sup> The rule does not appear to provide FCMs that are also AT Persons to submit one report covering their obligations as a clearing member FCM and AT Person.

## VI. Designated Contract Markets

Regulation AT would also impose new rules on DCMs intended to complement the proposed requirements on AT Persons and clearing member FCMs.

### A. Risk Mitigation and Testing Environments

The proposal would require DCMs to implement the pre-trade risk controls and other measures discussed above on both Algorithmic and non-Algorithmic Trading.

**DEA Orders.** As discussed above, Regulation AT would amend existing Regulation 38.255 to require DCMs to have in place and make available to FCMs pre-trade risk controls and order cancellation systems to facilitate FCMs' management of the risks that may arise from Algorithmic Trading using DEA.<sup>46</sup> As discussed above, the rules would require FCMs to calibrate such DCM-provided controls for DEA orders.

**All Orders.** For all other orders, including Non-Algorithmic Trading orders, Regulation AT would amend existing Regulation 40.20 to require that DCMs make use of pre-trade risk controls, order cancellation systems, and system connectivity controls applicable to AT Persons to prevent an Algorithmic Trading Disruption or similar disruption from manual trading, or an Algorithmic Trading Compliance Issue.<sup>47</sup>

**Test Environments.** Finally, Regulation AT would require DCMs to provide test environments that will enable AT Persons to simulate production trading.<sup>48</sup>

### B. Compliance Reports and Books and Records

Regulation AT would require DCMs to establish programs for reviewing compliance reports and remediating noted deficiencies. It also would require DCMs to have rules requiring each AT Person and their clearing member FCMs to keep and provide to the DCM books and records regarding their compliance Regulation AT rules. DCMs would review and evaluate, as necessary, the books and records maintained by AT Persons and clearing member FCMs regarding their compliance with such rules.<sup>49</sup> The DCM's review should "include measures by the [DCM] reasonably designed to identify and remediate any insufficient mechanisms, policies, and procedures described in such books and records."<sup>50</sup>

### C. Disclosure and Transparency in DCM Trade Matching Systems

The proposal includes additional disclosure and transparency obligations for DCMs.

#### Disclosures Regarding Electronic Matching Platforms or Trade Execution Facilities.

Regulation AT would amend Regulation 38.401 to require DCMs to disclose on their websites:

1. information relating the rules or specifications of their *electronic matching platform* or trade execution facility, including those that "*materially* affect the time, priority, price, or quantity of execution, or the ability to cancel, modify, or limit display of market participant orders." (emphasis added).<sup>51</sup>
2. except for those already disclosed, "any *known attributes* of the electronic matching platform . . . that *materially* affect the time, priority, price, or quantity of execution of market participant orders, the ability to cancel, modify, or limit display of market participant orders, or the

dissemination of real-time market data to market participants, including but not limited to latencies or other variability in the electronic matching platform and the transmission of message acknowledgements, order confirmations, or trade confirmations, or dissemination of market data.” (emphasis added).<sup>52</sup>

These public dissemination requirements would apply similarly to new product listings, new rules, and rule amendments that meet the specified criteria.

**Electronic Matching Platforms.** The Commission explained that “electronic matching platforms” encompasses matching engines and, more broadly, “the network architecture” that accepts, processes, and disseminates order messages and market data to market participants.<sup>53</sup>

**Materiality.** The Commission referred market participants to “the substantial case law on the issue of materiality when evaluating what information is material.”<sup>54</sup> The Commission noted that “[m]ateriality in the context of attributes of an electronic matching platform would include those attributes whose existence or degree a reasonable market participant would consider when making a decision on whether, when or how to place orders on an exchange’s platform.”<sup>55</sup>

**Attribute.** The Commission defines “attribute” in explanatory language as “any aspect of the structure, architecture, mechanics, characteristics, or other elements of the design or operation of an electronic matching platform that materially affects how market participant orders are received and executed, and how information on such orders and executed trades are communicated to other market participants.”<sup>56</sup> The Commission explains that DCMs have an obligation under the proposed rule to disclose not just *known* attributes but also those attributes the exchange *should have known*.<sup>57</sup>

**Exchange Functions and Order Execution.** Where they have a material impact, DCMs must disclose information about exchange functions such as self-trade prevention, implied spread markets, and priority assignment of orders in a central limit order book, where applicable. Exchanges also must disclose how available order types would be executed (or not) under different market conditions, where applicable.<sup>58</sup>

#### D. DCM Market and Trading Incentive Programs

The Commission also included in Regulation AT transparency measures for DCM market-maker and trading incentive programs.

**Public Disclosure.** Regulation AT would add new Regulation 40.25 to require that when DCMs are submitting rules for a market-maker or trading incentive program, which must be posted on their websites, they must include additional information that generally includes: the purpose of the program, the products eligible for benefits, a description of eligibility criteria, how a market participant may apply to participate, a description of benefits a market participant may receive under the program, a description of the requirements of the program, disclosure of any affiliation between the DCM and an entity acting as a market maker, and, where applicable, why a market maker program may not be open to all market participants.

**Disclosure to the CFTC or Division of Market Oversight (DMO).** A DCM would also be required to provide upon request certain information to the Commission or the Director of DMO regarding “individual program agreements, names of program participants, benchmarks achieved by program participants, and payments or other benefits conferred upon program participants.”<sup>59</sup>

**Prohibition on Payment for Trades With No Change in Ownership.** Regulation AT would prohibit the payment of market maker or trading incentive program benefits for trades between accounts under common beneficial ownership.<sup>60</sup>

## E. Self-Trading Measures

**Definition of “Self-Trading”.** Regulation AT would define “Self-Trading” as the “matching of orders for accounts that have common beneficial ownership or are under common control.”<sup>61</sup> The Commission requested public comment regarding whether it should define “common beneficial ownership,” and if so, how the term should be defined.<sup>62</sup> The Commission suggested that its Rule 150.4 aggregation rules “are a potential model for defining common beneficial ownership . . . .”<sup>63</sup>

**Self-Trade Prevention Tools.** Regulation AT would require DCMs to implement rules reasonably designed to prevent self-trading. The proposal would require DCMs to “apply, or provide and require the use of, self-trade prevention tools” for all orders on their electronic trade matching platforms.<sup>64</sup> Additionally, a DCM would be required to determine for itself or require market participants to identify “which accounts should be prohibited from trading with each other.”<sup>65</sup> The proposal includes two exceptions to the prohibition on self-trading:

- Self-trades would be permitted where they result “from the matching of orders for accounts with common beneficial ownership where such orders are initiated by independent decision makers.”<sup>66</sup> The rule would permit DCMs to define in its rules “independent decision makers.”<sup>67</sup>
- Self-trades would also be permitted “where such orders comply with the [DCM’s] cross-trade, minimum exposure requirements or similar rules, and are for accounts that are not under common beneficial ownership.”<sup>68</sup>

The Commission is also considering and requested comment on whether the rules should permit a *de minimis* amount of unintentional self-trading, and if so, what amount should be permitted.<sup>69</sup>

**Self-Trading Data.** The Commission would require that for each product and expiration month traded on a DCM in the previous quarter, the DCM publish on its website information on the amount of self-trading that occurred in that product.<sup>70</sup>

## VII. National Futures Association: Standards for AT and ATSS

The proposal would also add Section 170.19, which would require the NFA to adopt rules for each category of member, as it deems appropriate, requiring:

1. pre-trade risk controls and other measures for ATSS;
2. standards for the development, testing, monitoring and compliance of ATSS;
3. designation and training of algorithmic trading staff; and
4. operational risk management standards for clearing member FCMs with respect to customer orders originating with algorithmic trading systems.

As the Commission notes, the NFA would be required to adopt rules as it “deems appropriate” and therefore “rulemaking pursuant to proposed § 170.19 would be entirely at the discretion of the [NFA].”<sup>71</sup> The Commission’s intent with this proposed rule is that the NFA consider and adopt such rules where it considers necessary.<sup>72</sup>

## VIII. Conclusion

The Commission states that “Regulation AT attempts to balance flexibility in a rapidly changing technological landscape with the need for a regulatory baseline that provides a robust and sufficiently clear standard for pre-trade risk controls, supervision standards, and other safeguards for automated trading environments.”<sup>73</sup> Whether the Commission has struck the appropriate balance will be the subject of extensive comment and further discussion within the Commission. For example, Commissioner Giancarlo has questioned whether the costs that would be imposed on market

participants to comply with the rule are justified, in light of the fact that the rule would simply codify a number of best practices currently in effect throughout the industry.<sup>74</sup> Certain provisions of the proposal are likely to generate significant comments as well. Commissioner Giancarlo has identified concerns with the requirement that AT Persons maintain their source code in a repository that the Commission or DOJ staff may access.<sup>75</sup> Commissioner Sharon Y. Bowen, on the other hand, commented that the rule should go further in several areas.<sup>76</sup> Commissioner Bowen stated that the proposal did not require registrants to provide enough information in their annual reports.<sup>77</sup> Commissioner Bowen asked whether the Commission should “require registrants to submit information about how they train and monitor the staff responsible for handling algorithmic trading or about their order cancellation systems?”<sup>78</sup> Commissioner Bowen also suggested that the Commission consider whether to impose additional limits on market maker incentive programs, such as “prohibit[ing] DCMs from paying these program benefits for trades in which the benefits are, on a per trade basis, greater than the fees charged by the relevant DCM and affiliated derivatives clearing organization.”

All public comments are due 90 days from the date of publication of the proposal in the Federal Register.

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<sup>1</sup> *Regulated Automated Trading Proposal*, RIN 3038-AD52 (November 24, 2015), available at <http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/federalregister112415.pdf>.

<sup>2</sup> Q&A—Notice of Proposed Rulemaking on Regulation Automated Trading (“Regulation AT”); available at [http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/regat\\_qa112415.pdf](http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/regat_qa112415.pdf).

<sup>3</sup> *Proposal*, at § I.C.1. Commission staff have found that in a two-year period through 2014, “over 95 percent of all on-exchange futures trading occurred on DCMs’ electronic trade matching platforms.” *Id.* at 10. During that same two-year period, AT systems “were present in over 60 percent of all futures volume traded across all products in the nearly two-year period.” *Id.* at § I.A.

<sup>4</sup> In the “Flash Crash” of May 2010, for example, a flaw in an automated execution algorithm resulted in the algorithm submitting “orders even as prices moved far beyond traditional daily ranges.” *Id.* at § III. In another example, a coding error caused Knight Capital Group’s AT system to build up positions in the market that resulted in losses of more than \$460 million for the firm. *Id.*

<sup>5</sup> See *id.* at § II.A. These measures are also discussed in detail in the Concept Release. See *Concept Release on Risk Controls and System Safeguards for Automated Trading Environments*, 78 FR 56542, 56548 (Sept. 12, 2013).

<sup>6</sup> *Concept Release*, 78 FR 56542 (Sept. 12, 2013).

<sup>7</sup> *Proposal*, at § II.D.

<sup>8</sup> The SEC and FINRA have considered many of the same issues in the equity markets as the CFTC is considering in this rule proposal. For example, FINRA has provided guidance regarding the effective supervision and control practices for member firms and market participants that use algorithmic strategies. See *Guidance on Effective Supervision and Control Practices for Firms Engaging in Algorithmic Trading Strategies*, FINRA Regulatory Notice 15-09 (Mar. 2015) (available at [https://www.finra.org/sites/default/files/notice\\_doc\\_file\\_ref/Notice\\_Regulatory\\_15-09.pdf](https://www.finra.org/sites/default/files/notice_doc_file_ref/Notice_Regulatory_15-09.pdf)). In addition, the SEC adopted Rule 15c3-5 under the Securities Exchange Act of 1934, which requires brokers or dealers with access to trading directly on an exchange or ATS to implement risk management controls and supervisory procedures reasonably designed to manage the financial, regulatory and other risks of this business activity. See *A Return to Modesty - The SEC Clothes Naked Access: Adoption of Risk Management Controls for Broker-Dealers with Market Access*, WilmerHale Client Alert (Nov. 11, 2010) (available at <https://www.wilmerhale.com/pages/publicationsandnewsdetail.aspx?NewsPubId=93153>). Moreover, the SEC explored these and other related issues in depth in its concept release regarding equity market structure. See *SEC’s Equity Market Structure Concept Release Highlights Potential New Regulatory Initiatives*, WilmerHale Client Alert (Jan. 20, 2010) (available at <https://www.wilmerhale.com/pages/publicationsandnewsdetail.aspx?NewsPubId=87416>).

<sup>9</sup> Such determinations include, but are not limited to, “whether to initiate, modify, or cancel an order” or to determine “the product to be traded; the venue where the order will be placed; the type of order to be placed; the timing of the order; whether to place the order; the sequencing of the order in relation to other orders; the price of the order; the quantity of the order; the partition of the order into smaller components for submission; the number of orders to be placed; or how to manage the order after submission.” Proposed Regulation 1.3(ssss).

<sup>10</sup> The proposal defines several additional new terms related to Algorithmic Trading. “*Algorithmic Trading Compliance Issue*” means Algorithmic Trading that does not comply with the CEA, the Commission’s regulations, the rules of a DCM, the rules of the NFA, or the AT Person’s own internal requirements, or the requirements of the AT Person’s FCM. Proposed Regulation 1.3(tttt). An “*Algorithmic Trading Disruption*” is an event caused by an AT Person that “disrupts, or materially degrades” the algorithmic trading of the AT Person, the operation of the DCM on which the AT

Person is trading, or the ability of other market participants to trade on that DCM. Proposed Regulation 1.3(uuuu). An “Algorithmic Trading Event” is either an Algorithmic Trading Compliance Issue or an Algorithmic Trading Disruption. Proposed Regulation 1.3(vvvv).

<sup>11</sup> *Proposal*, at § I.C.

<sup>12</sup> *Id.* at § IV.N.

<sup>13</sup> “Direct Electronic Access” would be defined as “an arrangement where a person electronically transmits an order to a [DCM], without the order first being routed through a separate person who is a member of a derivatives clearing organization to which the [DCM] submits transactions for clearing.” Proposed Regulation 1.3(yyyy). The Commission intends that Direct Electronic Access be consistent with the term “direct market access” as it is used in Commission-regulated markets. *Proposal*, at § IV.D.7. The Commission also noted that “routed” means “the process by which an order physically goes from a customer to a designated contract market.” *Id.*

<sup>14</sup> Proposed Regulation 1.3(xxxx).

<sup>15</sup> *Id.* at § IV.E.

<sup>16</sup> *Id.* at § IV.D.6.

<sup>17</sup> The proposal expands the definition of “floor trader” in Regulation 1.3(x) to include persons not otherwise registered with the Commission who directly access a DCM for algorithmic trading.

<sup>18</sup> The proposal would generally define “AT Order Message” as “each new order or quote submitted through Algorithmic Trading to a designated contract market by an AT Person and each change or deletion submitted through Algorithmic Trading by an AT Person with respect to such an order or quote.”

<sup>19</sup> See Proposed Regulation 1.80(a).

<sup>20</sup> *Id.*

<sup>21</sup> *Proposal*, at § IV.F.3.

<sup>22</sup> The Commission does not mandate specific requirements for an Order Cancellation System; AT Persons have discretion to “design and implement appropriate parameters and procedures that are appropriate for their trading strategy or markets.” *Id.* at § IV.H.3.c.

<sup>23</sup> Proposed Regulation 1.80(b)-(f).

<sup>24</sup> Proposed Regulation 1.81.

<sup>25</sup> Proposed Regulation 1.81(a)(1)(vi).

<sup>26</sup> *Id.* Rule 1.31 generally requires persons to provide the DOJ or Commission access to records upon request. It also requires books and records to be stored electronically in a system that (1) preserves records in non-rewritable, non-erasable format (WORM) format, (2) automatically verifies the quality and accuracy of the storage process, (3) serializes the original and creates a date-time record, and (4) permits the immediate downloading in a form acceptable to the Commission or DOJ. 17 C.F.R. 1.31. Persons who only store records electronically are also required to hire a technical consultant. *Id.*

<sup>27</sup> See Ed Beeson, *CFTC’s Algorithm Inspection Plan Sparks Trade Secret Fears*, November 24, 2015, <http://www.law360.com/articles/731240/cftc-s-algorithm-inspection-plan-sparks-trade-secret-fears>; Gregory Meyer and Philip Stafford, *US regulators propose powers to scrutinise algo traders’ source code*, Financial Times, December 1, 2015, <http://www.ft.com/intl/cms/s/0/137f81bc-944f-11e5-b190-291e94b77c8f.html#axzz3uK8aaP2Q>.

<sup>28</sup> *Statement of Commissioner J. Christopher Giancarlo Regarding Notice of Proposed Rulemaking on Regulation Automated Trading* (November 24, 2015) available at <http://www.cftc.gov/PressRoom/SpeechesTestimony/giancarlostatement112415>. Commissioner Giancarlo also reiterated a number of concerns he previously has expressed with Regulation 1.31.

<sup>29</sup> *Id.*

<sup>30</sup> Proposed Regulation 1.81(b).

<sup>31</sup> Proposed Regulation 1.81(c).

<sup>32</sup> *Id.* “Algorithmic Trading Compliance Issue” means Algorithmic Trading that does not comply with the CEA, the Commission’s regulations, the rules of a DCM, the rules of the NFA, or the AT Person’s own internal requirements, or the requirements of the AT Person’s FCM. Proposed Regulation 1.3(tttt).

<sup>33</sup> Proposed Regulation 1.81(d).

<sup>34</sup> See *supra* note 14 for definition of “Algorithmic Trading Event.”

<sup>35</sup> Proposed Regulation 1.80(f).

<sup>36</sup> Proposed Regulation 1.83(a).

<sup>37</sup> *Id.*

<sup>38</sup> The Commission explained that an FCM could be both an AT Person and clearing member FCM in certain circumstances. For example, in the event that a clearing member FCM engages in both Algorithmic Trading for its own account and acts a clearing member with respect to its customers’ AT Order Messages, such clearing member FCM would be subject to the rules discussed above for AT Persons (with respect to its own Algorithmic Trading) and to rules applicable to clearing member FCMs. *Proposal*, at § IV.K.1-3. The Commission also included in its proposal additional examples of when an FCM is considered an AT Person. *Id.* The Commission’s examples make clear that a clearing member or non-clearing member FCM would be considered an AT Person when accepting customer orders and then engaging in Algorithmic Trading with respect to the customer’s orders (i.e., using its computer algorithms or systems to make some of the determinations regarding the order described in the definition of Algorithmic Trading).

<sup>39</sup> *Id.*

An “Algorithmic Trading Disruption” is an event caused by an AT Person that “disrupts, or materially degrades” the algorithmic trading of the AT Person, the operation of the DCM on which the AT Person is trading, or the ability of

other market participants to trade on that DCM. Proposed Regulation 1.3(uuuu).

<sup>40</sup> The Commission commented that this structure mirrors how current financial risk controls are implemented. Existing Rule 38.607 requires DCMs to establish controls facilitating FCMs' management of financial risk, and Rule 1.73 provides requirements with respect to clearing member FCMs' implementation of such controls. *Proposal*, at IV.J.2.

<sup>41</sup> Proposed Regulation 1.82(c).

<sup>42</sup> *Proposal*, at IV.J.4.

<sup>43</sup> Proposed Regulation 1.83(b).

<sup>44</sup> Proposed Regulation 1.83(b)(2).

<sup>45</sup> Proposed Regulation 1.83(d).

<sup>46</sup> Proposed Regulation 38.255(b).

<sup>47</sup> *Proposal*, at IV.N. (The "Commission recognizes that natural person traders manually entering orders also have the potential to cause market disruptions" and "believes it is also important to promote a basic degree of risk control for all trading regardless of source.").

<sup>48</sup> The test environment must (1) provide access to historical transaction, order and message data; and (2) enable AT Persons to conduct conformance testing of their ATs to verify compliance with the requirements of proposed rules addressing pre-trade risk controls and other measures and the testing and compliance of ATs. Proposed Regulation 40.21.

<sup>49</sup> Proposed Rule 40.22. The Commission also provided several examples where a DCM may find it necessary to conduct a review of books and records. These include where a DCM: becomes aware that an AT Person's kill switch is frequently activated; becomes aware that an AT Person's algorithm frequently performs in a manner inconsistent with its design; identifies frequent trade practice violations at an AT Person, which are related to an algorithm of the AT Person; or discovers that an AT Person represents significant volume in a particular product, thereby requiring heightened scrutiny. *Proposal*, at IV.K.3.

<sup>50</sup> Proposed Regulation 40.22(e).

<sup>51</sup> Proposed Regulation 38.401(a)(1)(iii).

<sup>52</sup> Proposed Regulation 38.401(a)(1)(iv).

<sup>53</sup> *Proposal*, at IV.M.2.a.

<sup>54</sup> *Id.* (citing *R&W Tech. Servs., Ltd. v. CFTC*, 205 F.3d 165, 169 (5th Cir. 2000) ("A statement or omitted fact is 'material' if there is a substantial likelihood that a reasonable investor would consider the information important in making a decision to invest."); *CFTC v. R.J. Fitzgerald & Co.*, 310 F.3d 1321, 1332 (11th Cir. 2002) (finding misrepresentations material where "an objectively reasonable investor's decision-making process would be substantially affected" by them and the misrepresentations would "as a matter of law, alter the total mix of relevant information available to the potential...investor.")).

<sup>55</sup> *Id.*, n. 423.

<sup>56</sup> The CFTC further explained that "attributes" include, but are not limited to, "aspects of the platform that may provide an advantage or disadvantage to a category of market participants," and also "that affect orders from all market participants regardless of access method or membership status, such as latencies within the matching engine and any data feeds." *Id.*

<sup>57</sup> This duty arises because DCMs have current obligations to regularly test and review their automated systems. *Id.* (citing Rules 37.1401(g) and 38.1051(h), 17 CFR 37.1401(g) and 38.1051(h) (2014)).

<sup>58</sup> IV.M.2.a.

<sup>59</sup> Proposed Regulation 40.26.

<sup>60</sup> Proposed Regulation 40.27.

<sup>61</sup> Proposed Regulation 40.23(a).

<sup>62</sup> *Proposal*, at IV.Q., n. 506.

<sup>63</sup> *Id.*

<sup>64</sup> Proposed Regulation 40.23(a).

<sup>65</sup> *Id.*

<sup>66</sup> Proposed Regulation 40.23(b)(i).

<sup>67</sup> *Proposal*, at IV.Q.3.

<sup>68</sup> Proposed Regulation 40.23(b)(ii).

<sup>69</sup> *Proposal*, at IV.Q.5.

<sup>70</sup> Proposed Regulation 40.23(d).

<sup>71</sup> *Proposal*, IV.F.2.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.* at 18.

<sup>74</sup> *Id.*

<sup>75</sup> *Statement of Commissioner J. Christopher Giancarlo Regarding Notice of Proposed Rulemaking on Regulation Automated Trading* (November 24, 2015) available at <http://www.cftc.gov/PressRoom/SpeechesTestimony/giancarlostatement112415>.

<sup>76</sup> *See generally Concurring Statement of Commissioner Sharon Y. Bowen Regarding Open Meeting on Regulation Automated Trading* (November 24, 2015), available at <http://www.cftc.gov/PressRoom/SpeechesTestimony/bowenstatement112415>.

<sup>77</sup> *Id.*  
<sup>78</sup> *Id.*

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