

COMMITTEE ON CAPITAL MARKETS REGULATION

March 15, 2016

U.S. Commodity Futures Trading Commission
1155 21st Street, NW
Washington, DC 20581
Attn: Christopher Kirkpatrick, Secretary of the Commission
RIN 3038-AD52

Re: Regulation Automated Trading

Dear Sir or Madam:

The Committee on Capital Markets Regulation (the “**Committee**”) is grateful for the opportunity to comment on the U.S. Commodity Futures Trading Commission’s (“the **CFTC**” or “the **Commission**”) proposed Regulation Automated Trading (“the **Proposed Rule**” or “**Proposed Regulation AT**”).¹

Founded in 2006, the Committee is dedicated to enhancing the competitiveness of U.S. capital markets and ensuring the stability of the U.S. financial system. Our membership includes thirty-five leaders drawn from the finance, investment, business, law, accounting, and academic communities. The Committee is chaired jointly by R. Glenn Hubbard (Dean, Columbia Business School) and John L. Thornton (Chairman, The Brookings Institution) and directed by Hal S. Scott (Nomura Professor and Director of the Program on International Financial Systems, Harvard Law School). The Committee is an independent and nonpartisan 501(c)(3) research organization, financed by contributions from individuals, foundations, and corporations.

Proposed Regulation AT aims to reduce the risk that algorithmic trading will cause disruptions on designated contract markets (“**DCM**”) by requiring implementation of risk controls and testing and monitoring of algorithms, among other measures, in addition to providing for discretionary inspections of source code. The Proposed Rule sets forth distinct but overlapping mandates for CFTC registrants engaged in algorithmic trading; futures commission merchants (“**FCM**”); and DCMs that provide markets for algorithmic trading.

Although the Committee supports the principles underlying the proposal, we are concerned that the Proposed Rule’s requirement that AT Persons make Algorithmic Trading Systems (“**ATS**”) source code available for inspection on demand by the Commission or the U.S. Department of Justice (“**DOJ**”) lacks a sound legal basis; creates serious cybersecurity risks; and sets a dangerous regulatory precedent. The Committee thus supports the adoption of a separate procedure for regulatory source code access that would require the Commission to obtain a subpoena and observe due process and intellectual-property protections. We are also concerned that the Proposed Rule imposes duplicative and unduly prescriptive requirements and therefore urge the Commission to take a more streamlined and flexible approach.

¹ Regulation Automated Trading, 80 Fed. Reg. 78,824 (proposed Dec. 17, 2015).

Summary of the Proposed Rule

A. Requirements for AT Persons

The Proposed Rule would require AT Persons—defined as essentially any person required to be registered with the CFTC that engages in algorithmic trading on a DCM²—to implement certain risk controls to prevent disruptive trading events.³ The Proposed Rule mandates two principal types of risk-control mechanisms: pre-trade risk controls and order-cancellation systems. Required pre-trade risk controls would include upper limits on order messages and execution frequency per unit of time; order-price parameters; and order-size limits.⁴ Order-cancellation systems must be capable of immediately halting the AT Person’s algorithmic trading; canceling resting orders; and preventing submission of new algorithmic-trading orders.⁵

The Proposed Rule would further require AT Persons to develop testing and monitoring standards for the ATS that they operate.⁶ All new ATS code and changes to existing code must be tested before implementation for possible disruptive tendencies, both in the AT Person’s testing environment and on each DCM on which the ATS will be used.⁷ In addition, an AT Person’s monitoring systems must trigger automated alerts upon certain specified events, including a breach of trading parameters and loss of network connectivity or data feeds.⁸ The Proposed Rule would further require each AT Person to regularly stress-test its ATS in addition to back-testing the system to identify issues that may contribute to a disruptive trading event.⁹ The Proposed Rule would also oblige each AT Person to document material changes to its ATS source code and keep a repository of its code available for inspection upon request by the Commission or the DOJ pursuant to § 1.31 of the Commission’s regulations.¹⁰

The Proposed Rule would further require proprietary-trading firms engaged in algorithmic trading on a DCM via direct electronic access¹¹ to register with the Commission as floor traders and thus become subject to the Proposed Rule’s obligations for AT Persons.¹² Finally, the Proposed Rule requires all AT Persons to become members of the National Futures Association (“NFA”), which under proposed § 170.19 must establish a program to prevent fraud and manipulation in algorithmic trading and perfect algorithmic trading mechanisms used on

² See *id.* at 78,843.

³ *Id.* at 78,937–38.

⁴ *Id.* at 78,937.

⁵ *Id.*

⁶ *Id.* at 78,938.

⁷ *Id.*

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.*

¹¹ § 1.3(yyyy) of the Proposed Rule would define “direct electronic access” as an arrangement whereby a person electronically submits an order directly to a DCM rather than routing the order through a futures commission merchant that is a member of the derivatives clearing organization that will clear the trade. *Id.* at 78,937.

¹² See *id.* at 78,845–47.

DCMs.¹³ This program must require AT Persons to implement any risk controls and testing and development standards that the NFA considers appropriate.¹⁴

B. Requirements for Clearing-Member FCMs

The Proposed Rule would require FCMs serving as clearing members for AT Persons to implement their own risk controls for such clients' trades, including the same types of controls that the Proposed Rule requires of AT Persons.¹⁵ Clearing-member FCMs must submit annual risk-control compliance reports to the DCMs on which their AT Person clients engage in algorithmic trading, according to proposed § 1.83.¹⁶

C. Requirements for DCMs

The Proposed Rule would require DCMs to provide an algorithm-testing environment and establish risk controls for all ATS orders that mirror the risk controls that AT Persons must implement.¹⁷ Moreover, each DCM must require and review risk-control compliance reports from AT Persons and their clearing-member FCMs and address any deficiencies that it identifies in these reports, in addition to periodically reviewing books and records kept by such AT Persons and FCMs in relation to their algorithmic-trading activities.¹⁸

Each DCM must also develop mechanisms to prevent “self-trades,” defined as trades between accounts under common ownership,¹⁹ and institute those mechanisms on its market or provide them to market participants for mandatory use. The Proposed Rule requires DCMs to publish quarterly statistics on the incidence of self-trading on their respective markets.²⁰ In addition to these disclosures, the Proposed Rule would also require DCMs to publicly identify any eligibility criteria that they use for market-maker and trading incentive programs.²¹

Analysis of the Proposed Rule

A. Requirement to Make Source Code Available for Inspection

In providing that AT Persons must make source code available for inspection “in accordance with § 1.31,” the Commission indicates that it considers repositories of source code to constitute “books and records” under that rule, as § 1.31 does not provide for inspection of any other types of materials.²² But the Commodity Exchange Act and the Commission’s rules have consistently used the term “books and records” to refer to backward-looking documents that

¹³ The text of the Proposed Rule allows AT Persons to join any registered futures association, but the NFA is the only registered futures association currently in operation.

¹⁴ *Id.* at 78,847–48.

¹⁵ *Id.* at 78,939.

¹⁶ *Id.*

¹⁷ *Id.* at 78,939–41.

¹⁸ *Id.* at 78,941.

¹⁹ *Id.*

²⁰ *Id.* at 78,941–42.

²¹ *Id.* at 78,942.

²² *See* 17 C.F.R. § 1.31 (2015).

memorialize historical “transactions and positions” and related data.²³ By contrast, source code is *forward-looking* in that it dictates the firm’s future trading strategies—that is, it determines how the firm’s trading activity will change in response to particular market contingencies should they occur. Further, historical books and records generally lack commercial value, whereas ATS source code encompasses a firm’s trade secrets and intellectual property. On-demand source code access thus seems to fall far outside the scope of the rubric for books-and-records inspections set forth in the Commission’s organic statute and existing regulations promulgated thereunder.

Other financial regulators that have addressed similar issues in algorithmic trading have not gone so far as to require on-demand source code access. Despite a host of other marked similarities between Proposed Regulation AT and the Financial Industry Regulatory Authority’s (“**FINRA**”) guidance for algorithmic-trading firms operating in equities markets, FINRA’s guidance at no point indicates an expectation that firms will open their source code repositories for inspection without a subpoena or a warrant.²⁴ Rather, the guidance only contemplates that an algorithmic-trading firm will retain records of source code and changes thereto for a period of time that is reasonable in light of the firm’s size and the complexity of its trading practices.²⁵ And the European Securities and Markets Authority (“**ESMA**”) similarly declined to claim discretionary source code access in addressing algorithmic trading via regulatory technical standards promulgated under the Markets in Financial Instruments Directive II.²⁶ Like FINRA, ESMA only requires firms to track material changes to algorithmic-trading software.²⁷

Moreover, granting regulators automatic access to source code gives rise to serious cybersecurity risks. As Chairman Massad, Commissioner Giancarlo, and Commissioner Bowen have each noted, cyber risk has emerged as “the greatest threat facing our financial system today,”²⁸ to such a degree that “notable cybersecurity breaches at major international companies or even governments are becoming a regular occurrence.”²⁹ Given the recent string of data breaches at federal agencies resulting in the theft of millions of sensitive records,³⁰ market participants fear that delivering their proprietary code to a regulatory agency could expose them

²³ See, e.g., 7 U.S.C. §§ 6g, 6i, 6n (2012); 17 C.F.R. §§ 1.18, 1.35, 4.23, 4.33 (2015).

²⁴ See FINRA, Regulatory Notice 15–09, Equity Trading Initiatives: Supervision and Control Practices for Algorithmic Trading Strategies (March 2015), https://www.finra.org/sites/default/files/notice_doc_file_ref/Notice_Regulatory_15-09.pdf.

²⁵ *Id.* at 5.

²⁶ Directive 2014/65, 2014 O.J. (L 173) 398–99 (EU), <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0065&from=EN> (Article 17.2).

²⁷ See ESMA, MiFID II/MiFIR REGULATORY TECHNICAL AND IMPLEMENTING STANDARDS – ANNEX I, at 208 (Sept. 28, 2015), https://www.esma.europa.eu/sites/default/files/library/2015/11/2015-esma-1464_annex_i_-_draft_rts_and_its_on_mifid_ii_and_mifir.pdf.

²⁸ Remarks of Chairman Timothy Massad Before the OFR-FSOC 2016 Annual Conference, U.S. Treasury Department (Feb. 5, 2016), <http://www.cftc.gov/PressRoom/SpeechesTestimony/opamassad-40>; see also Guest Lecture of Commissioner J. Christopher Giancarlo, Harvard Law School, Fidelity Guest Lecture Series on International Finance (Dec. 1, 2015), <http://www.cftc.gov/PressRoom/SpeechesTestimony/opagiancarlo-11>.

²⁹ Keynote Address by Commissioner Sharon Y. Bowen Before ISDA North America Conference (Sept. 17, 2015), <http://www.cftc.gov/PressRoom/SpeechesTestimony/opabowen-6>.

³⁰ See, e.g., Tal Kopan, *OPM Hit for Mishandling Data Breach Cleanup*, CNN, Dec. 10, 2015, <http://www.cnn.com/2015/12/10/politics/opm-data-breach-contract-improper-ig/>.

to grave risk that bad actors could steal the firms' core intellectual property via a cyberattack on the regulator.³¹

Furthermore, once the CFTC creates a mechanism for on-demand source code access, it cannot control which regulators might use that provision as a model. Foreign governments that may be far less diligent than the CFTC in handling sensitive information could point to the Proposed Rule to justify their own demands for U.S. firms' proprietary source code. Indeed, Chinese financial regulators are already seeking access to algorithmic traders' source code,³² and the Proposed Rule would only create a precedent to steel their resolve.

Given that the Commission's proposal for on-demand inspection of source code appears inconsistent with the law and regulations that it claims as authorization; generates serious cybersecurity concerns; and would set a dangerous regulatory precedent, the Committee recommends that the Commission remove any reference to § 1.31 and instead utilize an entirely separate procedure for seeking source code access. The Committee is encouraged by Chairman Massad's recent remarks expressing the Commission's willingness to implement structured procedures for source code requests, including an obligation to obtain a subpoena,³³ and the Committee strongly urges the Commission to ensure that the text of the final rule imposes such safeguards.

The Committee understands that proposed § 1.81 contemplates that firms will implement their own policies and procedures with respect to ATS source code development, including documentation of material changes to source code.³⁴ Although we appreciate the Commission's relatively accommodating approach in this regard, we believe that eliminating any reference to § 1.31 in the Proposed Rule would import additional flexibility and clarity into the proposed documentation and retention provisions, in addition to removing the aforementioned risks arising from automatic regulator access to source code. We therefore advise the Commission to replace the reference to § 1.31 in proposed § 1.81(a)(1)(vi) with a provision clarifying that, like FINRA's guidance, Regulation AT will permit each firm to adopt retention periods that are reasonable in view of the firm's size, resources, risk to orderly market operations, and other salient characteristics, rather than subjecting all firms to § 1.31's five-year minimum retention period.³⁵

B. Imposition of Duplicative and Unduly Prescriptive Requirements

The Proposed Rule creates regulatory redundancies by requiring DCMs and the NFA to take on similar implementing roles.³⁶ The NFA and DCMs that allow algorithmic trading must

³¹ See, e.g., Tim Cave, *CFTC Signals Retreat Over "Source Code" Repository*, FIN. NEWS, Feb. 19, 2016, <http://www.efinancialnews.com/story/2016-02-19/cftc-signals-retreat-over-source-code-repository>.

³² See, e.g., Gregor Stuart Hunter, *Electronic Traders Are in China's Sights*, WALL ST. J., Nov. 3, 2015, <http://www.wsj.com/articles/electronic-traders-are-in-chinas-sights-1446583148>; see also *Webcast of CFTC Technology Advisory Committee Meeting on February 23, 2016*, CFTC TECHNOLOGY ADVISORY COMMITTEE, http://www.cftc.gov/About/CFTCCcommittees/TechnologyAdvisory/tac_meetings (remarks of Richard Gorelick, Chief Executive Officer, RGM Advisors).

³³ Cave, *supra* note 31.

³⁴ Regulation Automated Trading, 80 Fed. Reg. 78,824, 78,938 (proposed Dec. 17, 2015).

³⁵ 17 C.F.R. § 1.31(a)(1).

³⁶ See Regulation Automated Trading, 80 Fed. Reg. 78,824, 78,849 (proposed Dec. 17, 2015).

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each establish risk-control requirements for AT Persons, among other standards.³⁷ And the proposal contemplates that each of these regulatory entities will ensure compliance with its standards through periodic reviews.³⁸ This regulatory overlap will impose unnecessary burden and expense. The Committee thus recommends that the Commission designate DCMs rather than the NFA as the “frontline regulator” responsible for ensuring that algorithmic-trading firms have appropriate risk controls and development and testing protocols in place. DCMs are most closely attuned to the needs of their respective marketplaces.³⁹ Moreover, DCMs already require certain risk controls⁴⁰ and would already be obliged to work with AT Persons to test new source code under proposed § 40.21. DCMs’ past experience and pending responsibilities thus render them the self-regulatory organizations best-suited to fulfill these oversight functions.

The Committee is also concerned that the Proposed Rule is inappropriately prescriptive in certain respects. We commend the Commission for its efforts to craft a principles-based regulatory framework,⁴¹ but we believe that the rule could benefit from additional flexibility, particularly with regard to risk controls. The proposal mandates a uniform set of risk-control measures for each algorithmic-trading firm, regardless of the firm’s size, role in the market, trading strategies and practices, and other relevant characteristics.⁴² To ensure that its approach is truly a flexible, principles-based framework, the Commission should permit each market participant to adopt controls that are commensurate with its individual role in the marketplace and the degree of risk that it poses to orderly market operations.

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Thank you very much for your consideration of the Committee’s position. Should you have any questions or concerns, please do not hesitate to contact the Committee’s Director, Prof. Hal S. Scott (hscott@law.harvard.edu), or its Executive Director of Research, John Gulliver (jgulliver@capmksreg.org), at your convenience.

Respectfully submitted,



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³⁷ See *id.* at 78,847–48, 78,939–40.

³⁸ See *id.*

³⁹ See *id.* at 78,946.

⁴⁰ See *id.*

⁴¹ *Id.* at 78,838.

⁴² See *id.* at 78,937–38.