United States House of Representatives Committee on Agriculture

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Hearing to Examine the CFTC's Proposed Rule: Regulation Automated Trading

Written Statement of Richard Gorelick
CEO, RGM Advisors, LLC

I. Introduction

Chairman Conaway, Ranking Member Peterson and members of the Committee, thank you for the opportunity to join you today to discuss the Commodity Futures Trading Commission's (CFTC's or the Commission's) proposed regulation on automated trading, or "Reg AT" as it is commonly known.[1] I am pleased to be with you today to discuss this significant regulatory proposal.

I am the CEO of RGM Advisors, a trading firm located in Austin, TX, that I co-founded in 2001. RGM Advisors is a technology-focused, quantitative trading firm that trades in a variety of equities and futures markets. We use computers to analyze tremendous amounts of market data, to determine what trades we want to make, to conduct those trades, and to manage risk. We have about 100 employees and most of our staff are software developers, information technologists, and quantitative researchers. Most of our software systems have been developed in-house. Our firm, like many in our sector, trades on a proprietary basis, using our own capital to take short-term positions in thousands of instruments.

I serve on the CFTC's Technical Advisory Committee (TAC) and I am a member of the FIA Principal Traders Group (FIA PTG) executive committee. My written testimony today expands on public comments I have shared with the CFTC TAC[2] and it reflects many of the views that FIA PTG has expressed to the Commission.[3]

I have been involved in industry-led efforts to develop best practices and guidelines on identifying and mitigating the risks of automated and electronic trading. Since 2010, FIA has published six papers related to these important topics. As a member of the TAC, I have reviewed and commented on CFTC's proposed regulation of automated trading since before the Commission first began considering its initial concept release.

The progression of automated trading has provided substantial benefits to our markets. Increasing automation and competition have helped to improve market quality, increase

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[1] Proposed Regulation Automated Trading, 80 FR 78824 (Dec. 17, 2015).
[2] *See* http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/tac_022316_transcript.pdf, page 29.
[3] *See* https://fia.org/sites/default/files/content_attachments/2016-03-16_Regulation_AT_Comment_Letter.pdf *and* https://fia.org/sites/default/files/2016-06-24_RegAT_Roundtable_Group_Comment.pdf.

transparency, and lower costs for investors, hedgers and end-users of all sizes. As we recognize and work to enhance the many benefits of automated trading, we must also ensure that rules and regulations keep pace with technological innovation. I have long been a strong advocate for a regulatory environment that promotes fair competition, encourages innovation, enhances transparency, manages systemic risk, lowers costs for investors and hedgers, and gives regulators the tools they need to detect and deter abuses.

I am supportive of the Commission's stated aims in developing Reg AT, which are to mitigate the risks arising from algorithmic trading activity, to increase transparency with respect to exchange programs and activities, and to update Commission rules in response to the evolution from pit trading to electronic trading. I appreciate the substantial effort put forth by the Commission staff in drafting this proposal.

While these goals are laudable, the proposed rule, as it currently stands, falls short of achieving these goals, and is overly complicated, costly, and confusing. Some aspects of the proposed rule are too broad, while others are too narrow to adequately address risks. I am concerned that the rule could amount to quite a lot of work by the industry and by the Commission to accomplish disproportionately small gains in market integrity, while introducing significant potential negative unintended consequences.

In my testimony, I will first set out generally accepted principles for the regulation of automated trading and then share substantive concerns with proposed Reg AT.

II. Principles for Regulation of Automated Trading

There is broad industry consensus on the principles that should guide any regulation of automated trading.

First, it is critical to recognize and leverage the substantial risk controls and safeguards that have already been put in place by the industry. The CFTC's TAC has provided a forum to explore current industry practices with respect to electronic trading. In addition to detailed discussions of industry best practices for risk management, exchanges (CME and ICE, in particular) have presented thoughtful risk controls and extensive surveillance capabilities in great detail. New regulation should build on the existing framework that has proven successful, and should not try to reinvent that framework.

Second, to be effective and relevant to dynamic market conditions and practices, regulations cannot and should not be overly prescriptive. Instead, as has been the CFTC's historical practice, regulators should adopt principles-based rules that allow for flexibility to distinguish between different activities, business structures, and technologies of market participants, as well as

changing market conditions, among other factors. Technology changes quickly, so it is important that the rules are able to stand the test of time.

Third, and most critical, pre-trade risk controls are the most effective safeguard for market integrity. Therefore, they should be applied comprehensively to all electronic orders, not just certain orders submitted by certain types of businesses or submitted through certain types of market access. Simply put, *all* electronic orders should be subject to risk controls, not just those from certain types of market participants. To do otherwise would create loopholes and blind spots.

To be clear, the application of risk controls to every order does not require every market participant to implement its own risk controls. The policy should be to ensure that all orders are subject to appropriate risk controls that can be provided in various ways by market participants, clearing firms, or exchanges.

III. Specific Concerns with Proposed Reg AT

With respect for the CFTC's significant work on this rule, I believe Reg AT tries to accomplish far too much in a single regulation, making it unwieldy and impractical. To address this, I support the idea of simplifying the rulemaking by breaking it up into separate components, in order of importance: 1) pre-trade and other risk controls, 2) policies and procedures for the development, testing, deployment and monitoring of algorithmic trading (including third-party software), and 3) if necessary, registration of certain market participants.

Considering these components separately would allow the Commission to focus first on the parts of Reg AT that are most important to market integrity and widely supported by industry participants: pre-trade and other risk controls. Separating the rulemaking would also allow the CFTC to determine the proper scope for each area of regulation.

My specific concerns with Reg AT fall into the following categories: the scope of the proposal, unnecessary registration requirements, and access to intellectual property, including source code, without due process.

A. The Scope of Reg AT is Too Broad in Some Parts and Too Narrow in Others

One of the stated goals of the proposed rule is to reduce the risks of automated trading. To accomplish this, it introduces a myriad of requirements, both technical and operational in nature, for newly defined "AT Persons."

Rather than starting from the principle that all electronic orders must be governed by certain risk controls, the rule proposal attempts to cover a limited class of market participants within the definition of an AT Person. Consequently, the rule would establish a class of market participant

that would not be required to have risk controls in place despite having a similar ability to impact market integrity. As a result, the rule may fail in its primary goal of protecting the market.

In other areas, the Commission's proposal is too broad. In particular, the rule would impose a wide range of very specific requirements pertaining to how AT Persons manage their automated trading operations. These requirements include detailed rules for development, testing, documentation, monitoring, training, compliance and reporting across several dimensions of a firm's operations. While some of these requirements roughly track industry best practices, others do not, and most of these requirements are burdensome and do not clearly contribute to market integrity.

As just one example, the proposal includes a provision that would require AT Persons to produce an annual report detailing all changes to their risk settings during the course of a year and to deliver that annual report to the exchanges on which they traded. It is not unusual for firms trading hundreds of products to change their risk limits multiple times per day. These changes are often made in an exchange-based interface managed by a clearing firm, and as a result, the clearing firm and the exchange know about the risk limit changes in real time. While it would amount to a lot of work for AT Persons to produce these annual reports and for exchanges to review them, it is hard to see what additional information would be communicated in the process, or how risk management would be improved. Such onerous requirements would both inhibit an AT Person's ability to innovate compared to non-AT Persons with similar businesses, and also dramatically increase the cost of maintaining algorithmic trading operations. These costs would certainly be passed on to market end-users in the form of higher transaction costs and less liquid markets.

Moreover, some of the proposed definitions are, in my opinion, too broad and, as a result, may be counterproductive. Much of the proposed rule is geared toward preventing "Algorithmic Trading Events" which are defined to include both "Algorithmic Trading Compliance Issues" and "Algorithmic Trading Disruptions." As a result of these definitions, the more comprehensive a firm's policies, the more liability it would risk if any practice were found to have varied from its written policy. Rational actors would be incented to have fewer internal controls, rather than more. Similarly, the rule would prohibit firms from "disrupting or materially degrading" their own trading. This requirement might encourage firms to continue trading in the face of potential risk management issues. In my opinion, those provisions should be eliminated from their respective definitions.

B. The Registration Requirements Are Unnecessary

The CFTC is proposing to create a new requirement for certain market participants trading solely for their own account and using automation to register with the Commission as floor traders. Setting aside the curious decision to register these automated traders, many of whom never set

foot on a trading floor, as "floor traders," this requirement is unnecessary. Exchange rules and industry best practices already require some types of pre-trade risk management for all market participants regardless of registration category. The trading activity by the market participants that would be covered by this requirement is already managed through exchanges and there is no gap in risk controls. The CFTC has the legal authority and should apply appropriate risk management requirements broadly to all market participants whether or not they are registered with the Commission.[4]

I support comments by FIA, FIA PTG, and other industry associations explaining that registration requirements are unnecessary. I reiterate that any market participant, regardless of registration status or type of trader, has the potential to disrupt markets. It should be noted that when the SEC studied market disruptions (or so-called mini-flash-crashes) they noted that the majority of such events were caused by human mistakes, such as fat-finger errors, rather than algorithmic trading bugs. In addition, if the Commission would start from the basic principle that all electronic orders should be subject to risk controls, and that these requirements should not hinge on registration status, the entire rule would become much less complex to design and implement.

Should the CFTC be determined to implement a new registration requirement, then such registration should be considered separately and apart from the proposed pre-trade risk controls in proposed Reg AT, so its potential effects can be given full and careful consideration. Any registration requirement should be based upon a new and more suitable registration category rather than over-loading the existing "floor trader" category created for individual market participants standing on a trading floor.[5] At a minimum, the Commission should delay adoption of any registration requirement until after it has implemented other components of Reg AT to evaluate the necessity of registration, which would be costly for new registrants and the Commission, and would be a burdensome distraction for the National Futures Association (NFA).

C. Source Code Should Only be Available to the Government with Due Process

[4] The Commission already has ample legal authority to impose requirements on non-registrants that trade on U.S. futures markets in order to prevent disruptive practices expressly described in Section 4c(a)(5) of the Commodity Exchange Act ("CEA"), as well as "any other trading practice that is disruptive of fair and equitable trading." Using this authority, the CFTC has a statutory basis to enact rules to require all traders (whether registered as AT Persons or not) to comply with requirements meant to avoid prohibited conduct.

[5] *See* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=60765 ("Even if the Commission disagrees and decides that registration is necessary to ensure compliance with the Proposal, CME Group questions whether the Commission has sufficient legal authority under the CEA to require registration as a 'floor trader' of a new type of distinctly non-floor trader. Historically, the scope of CFTC registrants has only been expanded when Congress provides the Commission with new statutory authority. […] In the absence of such new authority from Congress, the Commission proposes to introduce otherwise unregistered algorithmic traders who access an exchange through DEA into an existing statutory registration category. CME Group is not persuaded by the Commission's argument that Congress could have intended for the definition of 'floor trader' to include only this subset of algorithmic traders.")

The final concern I would like to raise today is the CFTC's proposed access to source code. The proposed requirement to turn over valuable intellectual property (IP) to the government on demand is simply unprecedented and unreasonable. The proper treatment of IP lies at the heart of our private enterprise system. As noted by CFTC Commissioner Giancarlo in connection with the issuing release for Reg AT[6], the secret formula for Coca Cola is not available to the FDA, certainly not on demand. The source code for Google's search algorithms is not available to the government without due process. Government agencies must make a reasonable showing of cause and get a proper court order, such as a subpoena, to gain access to intellectual property.

A trading firm's source code should be no different. Most modern trading firms are very much technology businesses. Many of our staff write software, and our source code constitutes important trade secrets and valuable IP about our future business plans. Modern trading firms invest significant time, effort and money in technological innovation, much of which is embodied in source code, and they go to great lengths to protect its confidentiality and their competitive edge. Not only would this proposed provision set a troubling precedent for government access to private information, but it would do so without any demonstrable regulatory benefits to offset the significant risk associated with the misappropriation of that intellectual property.

Proposed Reg AT would accomplish this unprecedented access by classifying source code as "books and records" which would make them available to the Commission and the Department of Justice upon request. Source code, however, is unlike other books and records such as trade blotters and similar records, which can be reasonably protected with standard confidentiality. Source code often is comprised of valuable trade secrets that represent substantial investment and innovation and can directly impact the competitiveness of a business.

It should be recognized that for most purposes, source code reviews would be incredibly costly for the CFTC. Trading firms have very large and complicated code bases that change very often. As an example, my firm is a relatively small trading firm. We have over a million lines of source code associated with our current trading systems. This code has been written over 15 years in about 10 different programming languages. We make changes of one kind or another almost daily. To review source code of multiple firms at any scale would require an army of computer programmer regulators.

The benefits to the CFTC of reviewing source code would, in most cases, be very limited. It is not plausible that reviewing source code as part of an audit or surveillance program would somehow help the CFTC prevent future market disruptions or provide any meaningful insight into how a trading system would operate in a real market when interacting with other traders in different market conditions. In most cases, surveillance and analysis of electronic audit trails (such as

[6] *See* http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/transcript112415.pdf , page 39.

orders, fills, and cancelations) would present a much more valuable and cost effective way to understand trading activity.

I can imagine circumstances in which a government agency, such as the CFTC, would have a legitimate interest in reviewing parts of a firm's source code. For example, in an enforcement action for market abuse, reviewing portions of source code might provide some insight into the intent behind the placement of certain orders. However, under those limited circumstances, the Commission should be required to get a subpoena, and put in place appropriate safeguards. To the extent that the CFTC takes possession of any source code, this would raise significant information security concerns.

Moreover, allowing easy government access to source code would set a dangerous global precedent with foreign governments, such as China, who are seeking to impose similar source code requirements on U.S. firms. In fact, the federal government recently emphasized the importance of intellectual property by signing the Defend Trade Secrets Act into law in order to enhance protections against the misappropriation of intellectual property. This development has not gone unnoticed. In fact, a number of technology and business-focused industry organizations have raised this exact point in formal comments to the CFTC.[7]

We are hopeful that this provision will be revised. CFTC Chairman Massad has indicated that the Commission "take[s] very seriously the fact that [the information] is proprietary, it is significant of value to firms, and . . . [we] would certainly… do everything [the CFTC] can to protect confidentiality."[8] As such, the current practice – which enables the CFTC or Department of Justice to seek a voluntary production of source code subject to agreed restrictions, or to request such source code via a validly issued subpoena in connection with a formal investigation – is sufficient and should be continued.

I understand that some regulators have worried that trading firms might not adequately retain their source code in such a way that they could make it available for inspection. While good software development practices already lead firms to retain their source code in software control systems, I believe it would be helpful for the Commission to work with industry groups to establish a principles-based retention policy for source code based on current practices that would ensure regulators have access to source code information when needed.[9] This would allow businesses to maintain control over their sensitive intellectual property while ensuring regulators can access information that they desire, after following appropriate processes.

IV. Conclusion

[7] *See* http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=60890&.
[8] *See* http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/transcript061016.pdf, pages 295-296.
[9] *See* https://fia.org/sites/default/files/2016-06-24_RegAT_Roundtable_Group_Comment.pdf, page 9-10.

Altogether, proposed Reg AT would impose costly burdens on market participants, without commensurate benefits. Our markets are dynamic and constantly changing. Mandated risk controls, like those in Reg AT, which are overly specific, could quickly become obsolete as markets, technology, and trading strategies evolve. Creating checklists and written policies might give the appearance of reform, but in practice, do not make markets safer or more resilient – and could instead create unintended incentives to the contrary.

The trading community has a direct interest in well-functioning and resilient markets. We want to comply with the rules of the road. We welcome improvements that actually make the markets safer and more efficient. However, when rules serve to impede those goals, we need to reconsider them. I am concerned that proposed Reg AT, as designed, would not accomplish its stated objective of protecting market integrity, because it would leave many electronic orders outside of its scope. Moreover, this proposed regulation, as currently written, would be costly for market participants and the Commission. These costs would ultimately be borne by market end-users in the form of higher transaction costs and less liquidity. Finally, the source code access provisions put valuable American intellectual property in jeopardy, are without precedent, and would have a chilling effect on technology both inside and outside of the derivatives world.

I appreciate the opportunity to testify before you today and I welcome the Committee's interest in consideration of this rulemaking. I look forward to answering any questions you may have.

Thank you.