March 15, 2016

Mr. Christopher Kirkpatrick
Secretary of the Commission
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW
Washington, DC 20581

Re: Regulation Automated Trading – 80 Fed. Reg. 78824 (December 17, 2015) (RIN 3038–AD52)

Dear Mr. Kirkpatrick:

CTC Trading Group, L.L.C. and its subsidiaries that act as liquidity providers in the regulated futures market, CTC Investments, LLC and CTC Energy LLC, (collectively, "***CTC***") welcomes the opportunity to comment on the proposed rule of the Commodity Futures Trading Commission ("***Commission***" or "***CFTC***") regarding risk controls, transparency measures, and other safeguards to enhance the regulatory regime for automated trading on U.S. designated contract markets ("***DCM***" or "***Exchanges***") (collectively, "***Regulation AT***").

CTC is a proprietary trading firm that trades futures as a liquidity provider on various Exchanges. CTC has "***Direct Electronic Access***" ("***DEA***") to Exchanges in order to serve its liquidity provider function. CTC is a Member Firm, or an affiliate of a Member Firm, at the Chicago Mercantile Exchange, the Chicago Board of Trade, the New York Mercantile Exchange, the Commodity Exchange, Inc., and ICE Futures U.S. CTC provides the perspective of a market participant that must use a futures commission merchant ("***FCM***") to clear trades and uses DEA to execute transactions on Exchanges. CTC does not provide the perspective of a swap dealer, a commodity pool operator or commodity trading advisor and, therefore, does not comment on those aspects of proposed Regulation AT.[1]

CTC supports the overall goal of Regulation AT of "reducing risk and increasing transparency in automated trading."[2] CTC also generally supports principles-based rules which will encourage, rather than stifle, the evolution of industry best practices in response to ever-evolving technology. However, Regulation AT, as currently constructed, is not the best method of achieving those goals.

In our view, the primary weakness of Regulation AT is that it ignores the tremendous strides the futures industry has made in successfully developing and implementing automated trading risk controls, and also undervalues the economic incentives that will continue to

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[1] CTC has never been registered in any capacity with the CFTC or National Futures Association ("***NFA***").

[2] Notice of Proposed Rulemaking, Regulation Automated Trading, 80 Fed. Reg. 78,824, 78,824 (proposed Dec. 17, 2015) (hereinafter "***NPRM***").

encourage market participants at all levels to develop and implement risk controls as necessitated by evolving technology. Alarmingly, Regulation AT threatens to unveil source code in an irresponsible manner that will likely destroy the confidentiality of source code, and as a result, destroy the value of market participants' trade secrets forever, thereby significantly harming market participants subject to the source code provisions of Regulation AT. In short, Regulation AT takes an unnecessarily heavy handed approach that will burden a market that is already experienced in handling the risks of automated trading.

Regulation AT will have serious legal and economic consequences for market participants. Rather than reducing risk and allowing the continued development of best practices, Regulation AT is likely to discourage continued development of best practices, stifle innovation, impose significant regulatory burdens on market participants, and devalue the businesses of at least the 420 AT Persons the rule proposal estimates may be regulated.[3] At the same time, Regulation AT will do little, if anything, to contribute to the safety and soundness of the market.

CTC's specific concerns with Regulation AT are as follows:

- Registration Requirement: Regulation AT would require that proprietary trading firms, such as CTC, register with the CFTC as "***Floor Traders***," and such firms' algorithmic trading would then be subject to the direct oversight of the CFTC. This unnecessarily augments the existing regulatory structure, which has been successful in developing risk controls surrounding automated trading. Instead of focusing on numerous new market registrants, it may be more effective for the CFTC's oversight to remain on the Exchanges, which have been generally successful in implementing automated trading risk controls.

- Source Code Repository: Regulation AT would require that persons engaged in algorithmic trading store their source code in a repository and provide such source code to the government at any time for any reason without a subpoena. This sort of unfettered government access to extremely valuable trade secrets, in which market participants have invested a tremendous amount of resources, is unprecedented and would introduce unreasonable and unnecessary risk into the marketplace.

- Burdensome Compliance Requirements: The requirements imposed on CTC by Regulation AT would require CTC to materially change its business practices. Worse, many of these requirements are nearly impossible to comply with. The result is an enormous compliance burden in terms of: (i) resources required to materially change or expand business practices; (ii) compliance resources that must be expended in order to comply with these difficult standards; and (iii) the potential liability should CTC fail to comply with such standards. However, the requirements do not appear to have a corresponding benefit.

We discuss each of the above concerns in greater detail below.

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[3] Please note that industry estimates suggest the number of AT Persons to be much higher.

We respectfully request that the CFTC carefully consider the comments herein when crafting final regulations on these issues, so that automated trading in the futures industry will continue to operate in a safe, sound, and innovative environment.

I. Regulation AT Fundamentally Alters a Successful Regulatory Structure

Regulation AT would amend the regulatory definition of "***Floor Trader***" to include a person who "solely for such person's own account" trades futures or swaps, uses DEA to access an Exchange for "***Algorithmic Trading***", and who is not already registered with the CFTC.[4] Regulation AT further provides that such a newly designated "***Floor Trader***" is an "***AT Person***" (for convenience, we refer to this new category of registrants as "***AT Person Floor Traders***").[5] The end result is that proprietary trading firms, such as CTC, which are not current CFTC registrants, will be required to register with the CFTC, and will have their automated trading activities subject to direct oversight by the CFTC. The CFTC speculates that this requirement will "enhance the Commission's oversight capabilities as they relate to entities with DEA and allow for wider implementation of some or all of the pre-trade controls and risk management tools" proposed by Regulation AT.[6] In reality, the registration requirement is not necessary to achieve this goal, but will instead cause uncertainty in the markets.

First, many of the requirements that Regulation AT seeks to impose through the registration of AT Person Floor Traders already apply to such entities through the Exchanges, which is where the CFTC's oversight is currently focused. Second, the Exchanges are better positioned to conduct oversight of AT Person Floor Traders' risk controls. Third, the CFTC's justification for the registration requirement ignores basic market realities. Finally, the CFTC lacks the authority to amend the regulatory definition of Floor Trader in the manner proposed by Regulation AT, and such amendment goes beyond the intentions of Congress. We discuss each of the above observations, in turn, below.

A. Registration is not Required to Impose Requirements on AT Person Floor Traders

1. Market participants have largely adopted Regulation AT's proposed risk controls

Market participants have long dealt with the risks posed by electronic trading, and have largely, without specific CFTC regulations or intervention, adopted measures that have successfully dealt with these risks. The CFTC tacitly acknowledges this by characterizing Regulation AT as doing no more than codifying "well-established risk control and other practices among market participants."[7] Thus, many of the risk controls mandated by Regulation AT for AT Person Floor Traders in Proposed Rule 1.80 have already been adopted, without a CFTC registration requirement, including, but not limited to:

- Maximum AT Order Message frequency per unit time;

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4 NPRM at 78,937 (to be codified at 17 C.F.R. § 1.3(x)(3)).
5 Id. (to be codified at 17 C.F.R. § 1.3(xxxx)(2)).
6 Id. at 78,846.
7 Id. at 78,847. We note that the CFTC attempts to justify Regulation AT with a laundry list of disruptive events caused by automated trading. Id. at 78,837. However, this list of recent events includes only *one* event related to the U.S. futures markets. Id. This amply demonstrates that participants in the U.S. futures markets have largely been successful in dealing with the risks presented by automated trading.

- Maximum execution frequency per unit time;
- Order price parameters;
- Maximum Order size limits;
- Order Management Controls;
- Connectivity monitoring systems; and
- Self-trade prevention.[8]

In other words the CFTC trails the market in the implementation of best practices. Given this reality, it makes little sense to create an entirely new category of registrants solely for the purpose of ensuring that these new registrants will follow rules and other commercial best practices that already apply to them. Further, this requirement ignores the fundamental structure of the futures market. Any person engaged in automated trading of futures necessarily has to do so through one of the Exchanges, each of which is already registered with the CFTC and subject to the CFTC's direct oversight.[9] To the extent any would-be AT Person Floor Trader has not implemented the widely-adopted best practices Regulation AT seeks to impose, this is because the AT Person trades on an Exchange that has not adopted those rules. The remedy for this is not the creation of an entirely new registrant category, but to impose requirements directly on Exchanges to adopt those rules, which the CFTC already has the power to do. Similarly, to the extent the CFTC wishes to impose additional requirements that have not been widely adopted, such requirements can be imposed on all market participants through the Exchanges. The creation of a new registrant category is unnecessary to achieve the CFTC's stated goal of codifying best practices.[10]

2. CFTC's oversight should continue to focus on the Exchanges as the direct regulator of market participants

CTC recognizes that pre-trade risk controls are an essential aspect of regulating automated trading and that the CFTC has a role to play in overseeing the market's implementation of risk-controls. However, it is imperative that the CFTC focus its oversight on the proper market participants. The CFTC's oversight of pre-trade risk controls should be focused on Exchanges, while Exchanges should maintain responsibility for overseeing the pre-trade risk controls of member firms. Altering this structure so that the CFTC, instead of Exchanges, directly oversees the risk controls of AT Person Floor Traders will undermine the stated goals of permitting flexibility for market participants, while at the same time compromising consistent application of the risk control requirements. The structure of Regulation AT is not flexible and will not allow AT Persons to "determine for themselves how

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[8] For example, CME Group currently deploys the following risk management tools: price banding, message volume controls, stop logic functionality, maximum order size, protection points for market and stop orders, market maker sweep protection, product price limits and circuit breakers, cancel on disconnect, and clearing firm kill switches. See Compilation of Existing Testing and Supervision Standards, Recommendations and Regulations, TAC Reference Document (Oct. 30, 2012) available at: http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/tac103012_reference.pdf. See, e.g. CME Risk Management Tools available at: http://www.cmegroup.com/globex/trading-cme-group-products/risk-management-tools.html.

[9] CEA § 4(a); 7 U.S.C. § 6(a).

[10] If the CFTC is set on creating a new registration category, CTC would submit that the focus should be registration requirements on orders, meaning the controls around the entry of orders into the trading environment, as opposed to the algorithms and systems that create such orders. The compliance burdens would only be associated with a market participant's ability to test and audit its orders entering the market.

required pre-trade risk controls and other measures should be designed and calibrated."[11] In fact, as drafted, it is the CFTC that will decide how the pre-trade risk controls of AT Persons should be designed and calibrated. This structure means the entity with far less insight than the Exchanges into the particular characteristics of a firm will be responsible for determining whether that firm is maintaining appropriate risk controls.[12] As a result, an AT Person Floor Trader must be concerned that, if its interpretation of Regulation AT's requirements differ from the CFTC's, it will be subject to enforcement action, even where its interpretation is ultimately reasonable. Further, interpretation of Regulation AT's flexible rules will take place through settlements of enforcement actions, rather than through the interpretation of Exchanges. Ultimately, this will result not in flexibility and innovation of best practices, but in uncertainty and ossification.

Another example of Regulation AT's misplaced focus on AT Persons is in the rules around Algorithmic Trading Compliance Issue (a definition limited only to AT Persons), Algorithmic Trading Disruption, and Algorithmic Trading Event (which, by definition, is an Algorithmic Trading Compliance Issue or an Algorithmic Trading Compliance Event). These definitions only apply to events at the AT Person level, and thus, the CFTC's oversight of these issues is at the AT Person level. However, the goal of Regulation AT is to prevent market disruption. Any such disruption will occur on the trading venue, and thus the CFTC's focus should be directed at Exchanges, which control the trading venue (and also have authority over market participants). Instead of imposing prescriptive requirements on AT Persons (and in the case of Algorithmic Trading Compliance Issue limiting a prescriptive requirement only to AT Persons), the CFTC could require the Exchanges to adopt rules designed to prevent Algorithmic Trading Events related to the market, and to track those Algorithmic Trading Events that do occur.

B. Exchanges are the Appropriate Regulators of AT Person's Risk Controls

The practical effect of the AT Person Floor Trader registration requirement will be to give the CFTC direct oversight of an AT Person Floor Trader's compliance with Regulation AT's requirements. It shifts oversight of a firm's risk controls from the Exchanges, which are well-suited to handle such oversight, to the CFTC, which is far less suited to perform such oversight. It ensures that the CFTC's stated goal of "flexibility," which is present in Regulation AT in theory, will turn into uncertainty in practice. It also potentially sets up a regulatory scheme that will provide loopholes for AT Person Floor Traders that loosely comply due to the flexibility built into the rules when a sounder and more effective regulatory scheme could be created at the technological point of entry: the Exchange.

1. Exchanges have demonstrated the expertise and competence required to oversee the risk controls for AT Persons

As noted above, the current automated trading risk control regime, in which Exchanges set forth their automated trading requirements and guidance on market participants, has been largely successful in encouraging the widespread adoption of risk controls for automated trading. This is not an accident. It is the primary business of Exchanges to stay abreast of state-

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[11] NPRM at 78,847.

[12] This construct is particularly troubling where the preamble of Regulation AT makes multiple references to AT Persons setting controls at a more "granular" level than in the text of the regulations. Such a vague standard will be difficult for AT Persons to implement.

of-the-art technology, acquire a deep knowledge of the characteristics of market participants, and recognize and nimbly respond to new risks in the marketplace.[13] The nature of automated trading is that the technology evolves rapidly, and that different firms with different characteristics and different risk profiles need to adopt different risk controls. Exchanges are well-positioned to recognize and analyze technological changes, to draft generally applicable rules to address them, and then to determine market participants' compliance with those rules according to their ability to acquire a deep understanding of market participant characteristics.

Accordingly, there is no need for the CFTC, a resource-constrained government agency with numerous regulatory responsibilities, to take on the burden required to exercise effective direct oversight of AT Persons.[14] To do so, the CFTC would need to keep abreast of rapidly evolving technology, and to understand the unique operations of hundreds of AT Person Floor Traders with the depth required to appropriately enforce Regulation AT's requirements. That is to say, the CFTC will have to know for a particular proprietary trading firm what constitutes the appropriate calibration of the "maximum execution frequency per unit time," "order price parameters," and other risk controls given the individual firm's size, market function, risk appetite, business plan, and numerous other firm-specific factors. Such a regulatory construct would fail from the outset.

C. The CFTC's Reasoning for the Registration Requirement Misunderstands the Economic and Operational Incentives of AT Person Floor Traders, FCMs, and Exchanges

The CFTC speculates that the requirements of Regulation AT could "serve to limit a 'race to the bottom' in which certain entities sacrifice effective risk controls in order to minimize costs or increase the speed of trading."[15] The CFTC's speculation misses the point because market participants will only invest in "speed of trading" if there is quality of output, which can only be achieved with effective risk controls. Further, given the fact that in the absence of CFTC regulations the industry has not experienced a "race to the bottom" but has instead widely adopted a set of largely successful best practices which Regulation AT seeks to codify,[16] the CFTC's assertion "betrays a naïve misunderstanding of elementary microeconomics."[17] The business model of proprietary trading firms such as CTC is to potentially profit from taking on risk through employment of trading strategies. CTC has every incentive to ensure that its systems properly execute its proprietary trading strategy. CTC has no incentive to take on risk through poorly designed and tested automated trading systems. There is no potential profit to be gained from implementing an unstable and risk-bearing automated trading system into the market. This is why proprietary firms such as CTC employ state-of-the-art technology. Any failure of such technology could lead to significant losses of capital for CTC that are entirely divorced from a (possibly profitable) trading strategy. Simply put, firms such as CTC will not

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[13] Indeed, the CME Group, Inc. hails itself as a technology company: "From the 19th century onward, new technologies and other advancements continuously fuel engines of wealth creation...In the early 21st century, CME Group develops and implements technology that fosters efficient global markets, offering unprecedented flexibility and accessibility." See http://www.cmegroup.com/stories/#!2-story-advancements.

[14] See Testimony of Chairman Timothy Massad Before the U.S. House Appropriations Committee, Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies on February 10, 2016 available at http://www.cftc.gov/PressRoom/SpeechesTestimony/opamassad-42 ("I believe our budget is simply not proportionate to the responsibilities we face.")

[15] Id. at 78,899.

[16] Id.

[17] Id. at 78,946 (statement of Commissioner J. Christopher Giancarlo).

take on the risk that automated trading systems will erroneously execute a carefully constructed trading strategy.

In addition to the incentives that cause proprietary trading firms to implement appropriate risk controls related to automated trading, the structure of the futures market, where trades must be cleared through an FCM, further ensures that such firms will maintain appropriate risk controls. Because an FCM guarantees a firm's trades, it has a great deal of skin-in-the-game which gives it every incentive to ensure that each firm whose trades it clears has effective risk controls around its automated trading activities. Certainly there is no incentive for FCMs to allow a firm whose trades it clears to "sacrifice effective risk controls" for any reason. Rather, FCMs will continue to perform the risk monitoring and mitigating functions they always have.

Finally, if the desire of proprietary trading firms and FCMs not to lose money does not serve as a sufficient incentive to avoid a "race to the bottom," proprietary trading firms are subject to the rules of the Exchanges on which they trade. Exchanges have broad authority to sanction any excessive risk-taking, including potential expulsion of malfeasant market participants. Exchanges are equally incentivized to deploy state-of-the-art technology in their risk management programs to avoid at all costs being labeled as an exchange with poor technology and risk management controls. So as not to leave all implementation of risk management controls to market participant discretion, CTC supports properly scoped baseline risk management controls for the Exchange mandated through regulation by the CFTC.

Given all of these considerations, the risks that Regulation AT seeks to mitigate - operational risks, market liquidity risks, market integrity risks, transmission risks, clearing and settlement, and risks to effective risk management - can be (and, largely have been) addressed without imposing an entirely new registration requirement that would constitute a fundamental change to what is already an effective regulatory regime.

D. The Proposed Amendment to the Definition of Floor Trader is Beyond the Scope of the CEA Definition

The proposed amendment to the definition of the term "Floor Trader" in Regulation AT is beyond the scope of the term "Floor Trader" contemplated by Congress, and thus beyond the power of the CFTC to adopt.[18] With little explanation, the NPRM concludes that the CFTC has the power to amend the regulatory definition of "Floor Trader" to encompass proprietary traders engaged in algorithmic trading on a DCM because the CEA definition of "Floor Trader" includes any person who trades "in or surrounding any pit, ring, post, or other place provided by a contract market for the meeting of persons similarly engaged,"[19] and because the CFTC once speculated that it might have the power to regulate electronic trading.[20] This conclusion ignores basic principles of statutory construction and common sense.

Specifically, it is a well-established principle of statutory construction that where a generic term such as "or other place" follows a list of specific items such as "pit, ring, post," the meaning of the generic term is understood to be limited to things of the same type as the specific

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18 CEA § 1a(23); 7 U.S.C. § 1a(23).
19 Id. (emphasis added).
20 NPRM at 78,846.

items listed.[21] Here, the CEA definition of "Floor Trader" clearly contemplates individuals trading in some physically defined space where people meet for the purpose of trading futures. Pits, rings, and posts all refer to actual physical places, and the CEA specifically provides that the place must be "for the meeting of persons." Thus, the term "or other place" is properly interpreted to mean some other physical place where persons can actually meet to trade. Stretching the definition to include automated trading via electronic access strains the meaning of the term "Floor Trader" beyond its breaking point, and is clearly beyond what Congress contemplated. This point is bolstered by the fact that the term "Floor Trader" was added to the CEA in 1992.[22] Although electronic trading was not as prevalent then as it is today, the possibility of an increase in electronic trading could certainly have reasonably been contemplated by Congress at that time and provided for in the statutory definition of the term Floor Trader.[23]

However, even assuming (without conceding) that the CFTC technically has the authority to enact its proposed amendment to the regulatory definition of Floor Trader, the common sense fact that the proposed definition is severely out of line with the current definition should give the CFTC serious pause. The regulatory definition of Floor Trader, and thus the regulatory regime surrounding Floor Traders, has been in place since 1993, and has long revolved around the concept of individual persons trading in physical places.[24] In this regard, CTC understands that there are 750 individuals registered as Floor Traders with the NFA, but only 8 entities. Regulation AT would upend this long-established regulatory construct, all for the dubious purpose of requiring the registration of AT Persons - which as explained above can easily be made subject to any requirements the CFTC wishes to impose through Exchange rules without registration.

II. Unfettered Government Access to Source Code Introduces Dangers to Market Participants and the Marketplace as a Whole

Proposed Rule 1.81(a)(1)(vi) requires that AT Persons maintain a source code repository to preserve copies of all source code used in the AT Person's production environment, and to make such code available to the CFTC, or the Department of Justice, in accordance with CFTC Regulation 1.31, i.e., at any time for any reason without a subpoena. It is difficult to overstate just how broad and unprecedented this requirement is, the significance of the threat it poses to the intellectual property rights of individual market participants and the industry, and its capacity to thwart innovation in this sector.

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21 See, e.g., United States v. Martin, 796 F.3d 1101, 1109 (9th Cir. 2015).

22 NPRM at 78,846.

23 It is important to note that according to the CFTC's own history, February 2, 1989 marked the date the CFTC "approved rules proposed by the Chicago Mercantile Exchange for the basic Globex system, the first international electronic trading system." Trading on Globex did not begin until June 1992. See History of the CFTC, available at http://www.cftc.gov/About/HistoryoftheCFTC/history_1980s.

24 Id. Indeed, the rule establishing the CFTC's Floor Trader registration regime noted that:

> the immediate impetus for the FT registration requirement was from conduct occurring on the trading floor of an exchange and that registration of persons trading on the floor is of the most immediate regulatory concern...the Commission believes that it is appropriate to defer consideration of the application of floor trader registration requirements to persons using electronic trading systems and to reconsider the subject at a later date.

See Registration of Floor Traders; Mandatory Ethics Training for Registrants; Suspension of Registrants Charged with Felonies, 58 Fed. Reg. 19575, 19576 (1993). Therefore, given the time that has passed since this regulation was finalized and the lack of a statutory definition, the notion that the AT Person Floor Person is an outgrowth (and deferral) of the original rule is questionable.

As Commissioner Giancarlo noted, source code "is the intellectual property of AT Persons representing their current and future trading strategies."[25] It constitutes more than just "sensitive information." Source code constitutes carefully constructed trade secrets, trade secrets which are the lifeblood of a proprietary trading firm. A firm's source code represents how a firm intends to use its particular collective expertise and knowledge of the market to compete in a difficult marketplace, and requires an enormous investment of resources. The value of a proprietary trading firm is almost entirely wrapped up in its source code. Further, that source code only has value to the extent it remains secret - if it is exposed, its value, and the value of the firm that developed it, are lost. The CFTC proposes, in Regulation AT to require AT Persons to maintain a repository of the entirety of its source code, which, in and of itself constitutes an enormous enterprise risk.[26] Even worse, the CFTC proposes that it have the right, for any reason at all, to essentially acquire control over what constitutes the entire value of a company. Regulation AT's approach to this unprecedented requirement is shockingly cavalier.

Nowhere in the NPRM does the CFTC explain exactly what steps it will take to safeguard the extremely valuable data to which it seeks unfettered access. What procedures will be in place to prevent ex-CFTC staffers (or consultants and contractors) who have reviewed such data in the course of their employment from using that data in the private sector? How will inadvertent disclosure of such data be prevented? What steps will the CFTC take to ensure that no company's source code will be inadvertently comingled with that of another company? What protections against malware will be put in place? Because this kind of information is maintained in secret and only produced in litigation pursuant to service of process or a subpoena, and under strictly-controlled conditions of judicially enforceable Protective Orders, dissemination of source code in litigation occurs (if at all) only upon demonstration of the need for its production relative to other technical information, and under carefully delineated restrictions. These kinds of protections, commonplace in intellectual property disputes, would be lost under Regulation AT. Given the extensive requirements Regulation AT imposes on how market participants may conduct automated trading, the complete lack of standards the CFTC imposes on itself for dealing with the source code underlying a firm's automated trading is startling and antithetical to U.S. intellectual property laws.

There can be no reasonable debate that the source code in question constitutes a trade secret. The Illinois Trade Secret Act's definition of a trade secret (which closely tracks the Uniform Trade Secret Act) is as follows:

> § 2. As used in this Act, unless the context requires otherwise:
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> (d) "Trade secret" means information, including but not limited to, technical or non-technical data, a formula, pattern, compilation, program, device, method, technique, drawing, process, financial data, or list of actual or potential customers or suppliers, that:
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> (1) is sufficiently secret to derive economic value, actual or potential, from not being generally known to other persons who can obtain economic value from its disclosure or use; and

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[25] Id. at 78,947 (statement of Commissioner J. Christopher Giancarlo).

[26] Within firms, access to source code is strictly controlled - even high level employees at CTC cannot gain access to its source code. Requiring an internal repository would decrease internal access controls, and would increase the risk that a single cybersecurity event could expose the code.

(2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy or confidentiality.[27]

In addition, acts of misappropriation of such information may include overt acts, such as theft or bribery, but likewise can arise from the breach of a duty to maintain secrecy or limit use of the trade secret information.[28] While not appreciated by the proposed regulations, should the CFTC take possession of the source code under an obligation to maintain it in confidence, it could itself be subject to a claim of misappropriation should such information be stolen by a third party. Such a claim would be of little comfort to the intellectual property owner, and would likely result in irreparable harm and incalculable loss, potential legal claims against the CFTC aside.

Source code receives special protection under Illinois law. For example, in Trading Techs. Int'l, Inc. v. GL Consultants, Inc., the U.S. District Court for the Northern District of Illinois refused a request to lower the protective category of the source code at issue in the dispute, even though the subject of the source code was made public. The court reasoned that the source code was still at risk of being misappropriated and applied to future patentable designs, and thus worthy of the court's highest protection.[29] Consistently, it is routine in intellectual property disputes, including in Illinois, for litigants to adopt and memorialize in protective orders, stringent protections for trade secret information. For example, recent protective orders have explicitly described the extensive protections required for the disclosure of source code, including providing the code only on a computer that is not connected to any network at the time of viewing and requiring all copies to be returned or destroyed on completion of the litigation.

The extraordinary care with which trade secret information is treated by courts and litigants stems from the fact that **once a trade secret is no longer confidential, its value is lost forever**. As reflected in the definition of a trade secret above, trade secret protection is maintained only in the face of reasonable efforts to maintain the information as confidential. Placing source code in an unspecified repository with no express provisions or procedures for ensuring that confidentiality and data integrity will be maintained is unreasonable under the circumstances, and would undermine the substantial investment that stakeholders have made in generating that form of intellectual property.[30] These are existential threats for stakeholders, and in the absence of any demonstrated need to create such a repository and evidence that its

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[27] See 765 Ill. Comp. Stat. Ann. 1065/2, § 2(d).

[28] Id. at § 2(a), (b).

[29] Trading Techs. Int'l, Inc. v. GL Consultants, Inc., No. 05 C 4120, 2007 WL 1468552, at *3 (N.D. Ill. May 16, 2007).

[30] In the last few years, the U.S. Government has taken an active role in evaluating the threats posed by trade secret misappropriation and advising companies on best practices. For example, as stated in the 2013 Report of the Commission on the Theft of American Intellectual Property: "The effects of [IP] theft are twofold. The first is the tremendous loss of revenue and reward for those who made the inventions or who have purchased licenses to provide goods and services based on them, as well as of the jobs associated with those losses. American companies of all sizes are victimized. The second and even more pernicious effect is that illegal theft of intellectual property is undermining both the means and the incentive for entrepreneurs to innovate, which will slow the development of new inventions and industries that can further expand the world economy and continue to raise the prosperity and quality of life for everyone. Unless current trends are reversed, there is a risk of stifling innovation, with adverse consequences for both developed and still developing countries." See http://www.ipcommission.org/report/ip_commission_report_052213.pdf.

benefits would outweigh the serious threats that it poses to innovators, it simply is unjustifiable.[31]

Even more startling, given that the overarching goal of Regulation AT is the protection of the marketplace, is the lack of attention to the significant danger posed by the possibility that the CFTC may hold the source code of large numbers of market participants without adequate safeguards. Unfortunately, the U.S. government does not have an unblemished record for safeguarding sensitive information.[32] A large scale data breach that exposed the data of many AT Persons could have devastating and wide-ranging effects on U.S. futures markets.

III. Registration and Compliance Requirements of Regulation AT Are Overly Burdensome to Proprietary Trading Firms

As noted above, Regulation AT's new registration requirement for AT Person Floor Traders fails to accomplish Regulation AT's stated goals for many reasons. It imposes duplicative requirements on AT Person Floor Traders. It shifts oversight of risk controls from Exchanges, which are well-suited for the task, to the CFTC, which is not. It introduces unnecessary uncertainty into the marketplace. It ignores the realities of the market in which AT Person Floor Traders function. In short, the registration requirement results in few benefits to the safety and soundness of the markets. What the registration requirement will result in, however, is an extraordinary burden on the proprietary trading firms that will be subject to it.

A. Registration with NFA Imposes Unnecessary Burdens

In addition to registration with the CFTC as a "Floor Trader," Proposed Rule 170.18 would require CTC, as an AT Person, to register with the NFA. The NPRM fails to explain what the benefits of this requirement are.[33] However, the requirement will without a doubt lead to significant extra costs. Without NFA oversight of AT Persons, the futures industry has functioned incredibly well, because FCMs and Exchanges have established good rules around a variety of different issues, including automated trading. The Exchanges have the expertise necessary to craft appropriate risk controls for member firms, and already have the authority to impose such requirements. Regulation AT's NFA registration requirement merely adds an unnecessary regulatory burden on AT Persons, who are already subject to the rules of the Exchanges on which they trade.[34] Of course, CTC will incur the additional costs of registration with the NFA and annual dues. The requirement could also lead to increased compliance costs, with no tangible benefits, as it might subject CTC to the full breadth of rules that are designed for customer facing registrants, rather than rules that are appropriate for proprietary trading firms.

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[31] A possible approach to address what should be the fundamental concern of the CFTC is for the CFTC to instruct the Exchanges to require that AT Persons maintain source code used in production that generates and routes orders to the marketplace as part of a recordkeeping requirement or as part of a general CFTC recordkeeping requirement.

[32] Julie Hirschfield Davis, Hacking of Government Computers Exposed 21.5 Million People, N.Y. Times (July 9, 2015) available at http://www.nytimes.com/2015/07/10/us/office-of-personnel-management-hackers-got-data-of-millions.html?_r=0.

[33] Largely for reasons already stated, CTC does not believe this requirement has any benefits.

[34] Curiously, the NPRM states that the CFTC "expects that entities that will be required to become members of an RFA would not incur any additional compliance costs as a result of their membership in an RFA." Id. at 78,934.

In addition to the costs proprietary trading firms such as CTC would incur, this requirement will result in increased costs for NFA, which would need to expend time, expertise, and resources to learn about proprietary trading at a granular level. This is particularly wasteful given the expertise that Exchanges have already developed in this regard, as noted above.

B. Regulation AT Will Result in Dramatically Increased Compliance Costs

1. Direct compliance costs will be significant

The NPRM estimates that the one-time cost of Regulation AT would be $904,476, and that annual costs would be $68,775.[35] As an initial matter, we note that the CFTC may want to consider whether unarticulated benefits would exceed the costs where the costs are estimated to be at least $1 million for each AT Person Floor Trader, particularly where much of that will be borne by smaller entities with limited resources.

However, beyond that, the NPRM grossly underestimates the actual costs of Regulation AT, which CTC anticipates will be significant. For example, the hourly costs are too low for AT Persons to come into compliance with the new rules. Further, some of the costs characterized as "one-time costs" are ongoing costs. Importantly, the "one-time costs" of developing the risk controls is a serious misnomer because it fails to acknowledge the significant on-going costs, particularly where the regulation requires real-time monitoring.

2. The policies and procedures required for AT Persons would alter CTC's business practices with no material market benefit

Regulation AT also will require the development, drafting, and implementation of new, prescriptive policies and procedures. As a liquidity provider, CTC has policies and procedures in place relevant to its role and its status as an entity regulated by an Exchange. Regulation AT would require CTC to draft, implement, and test a whole new series of policies to demonstrate compliance with Proposed Rule 1.81(a). Unfortunately, the requirements of Proposed Rule 1.81 are extremely prescriptive. Adhering to the required policies will require that CTC alter its business practices in a manner that will do little to reduce risks in the market.

Specifically, Proposed Rule 1.81(a) directs how AT Persons must maintain test environments, what AT Persons must test for when developing Algorithmic Trading systems, requires AT Persons to conduct regular back-testing to "identify circumstances that may contribute to future Algorithmic Trading Events," requires regular stress testing, and requires that AT Persons document the "strategy and design" of proprietary algorithmic trading software.

Proposed Rule 1.81(b) generally requires an AT Person to provide for the continuous monitoring of its algorithmic trading systems, which will also lead to significant unnecessary burdens on compliance and trading staff, which the NPRM fails to acknowledge. An AT Person would be required to create a new position or re-deploy resources for an employee or several employees to monitor trading and the use of algorithms. An entity, such as CTC, that participates in multiple products on a global scale would be particularly burdened by this requirement. Proposed Rule 1.81 is far from principles-based - it prescribes the adoption of specific policies and procedures where compliance with those procedures will fundamentally alter the way CTC, and many other proprietary trading firms, will do business. It appears that

35. NPRM at 78,925-26.

the CFTC may have overestimated the extent to which its proposed policies and procedures in Proposed Rule 1.81 reflect the actual business practices of AT Persons.

Accordingly, because the CFTC proposes rules that will alter the business practices of many market participants, the cost/benefit analysis should ensure that such rules have a tangible benefit in the form of risk reduction. Unfortunately, the NPRM does not articulate any actual benefit from imposing these prescriptive requirements, beyond speculation that they "may reduce the risk of market disruptions such as the 2012 incident involving Knight Capital."[36] A single incident in a different market is a threadbare justification for imposing prescriptive requirements on AT Persons. Notably, the CFTC does not explain how Knight Capital's general failures - i.e., that it "did not have adequate controls and procedures for code deployment and testing for its order router, did not have sufficient controls and written procedures to guide employees' responses to significant technological and compliance incidents, and did not have an adequate written description of its risk management controls"[37] - apply to the current business practices of AT Persons such that the CFTC is justified in imposing prescriptive requirements. In fact, as noted above, adequate controls and procedures for automated trading have been widely adopted in the industry, because it is in the interests of market participants to prevent automated trading systems from malfunctioning. Given this, there is little justification for the CFTC to adopt the prescriptive, one-size-fits-all approach as proposed.

3. Proposed Rule 1.81 requires standards for which compliance will be impossible

To make the prescriptive requirements of Regulation AT even worse, it essentially requires creating policies that will be impossible to demonstrate compliance with, or which will create a scenario where compliance will be nearly impossible, essentially creating a zero-tolerance, strict liability standard. Proposed Rule 1.81(a) requires AT Persons to prevent even minor Algorithmic Trading Events through testing of algorithmic trading systems. Proposed Rule 1.81(b) requires AT Persons to identify minor Algorithmic Trading Events in real-time. Such standards are unrealistic.[38]

The issue with the requirements of Proposed Rule 1.81 begins with the problematic definitions of Algorithmic Trading Compliance Issue and Algorithmic Trading Disruption (which, combined, constitute the definition of Algorithmic Trading Event). Proposed Rule 1.3(tttt) defines "Algorithmic Trading Compliance Issue" as an event at an AT Person that causes that person's algorithmic trading not to comply with the CEA or CFTC regulations, DCM rules, NFA rules, or the AT Person's own internal requirements.[39] Proposed Rule 1.3(uuuu) defines "Algorithmic Trading Disruption" as an event that "disrupts or materially degrades" the AT Person's algorithmic trading, the operation of the DCM on which it trades, or the ability of other market participants to trade on that DCM. In other words, an "Algorithmic Trading Event"

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36 NPRM at 78,859.

37 Id.

38 This requirement is particularly troubling given recent enforcement trends that have resulted in individual criminal liability. See, e.g. Indictment, United States v. Coscia, No. 14-cr-551 (N.D. Ill.), available at http://www.justice.gov/sites/default/files/usao-ndil/legacy/2015/06/11/pr1002_01a.pdf and Kim Janssen, CME Trader Found Guilty in Landmark 'Spoofing' Case, Chi. Tribune, Nov. 3, 2015, http://www.chicagotribune.com/business/ct-spoofing-trial-1104-biz-20151103-story.html.

39 We note that including non-compliance with internal requirements in this definition discourages the adoption of robust internal rules.

could, by definition, be an event that affects only the internal operations of an AT Person. Also, because the materiality qualifier does not apply to "disrupts" in the definition of Algorithmic Trading Disruption, the most minor disruption would constitute an Algorithmic Trading Event, even if it has no tangible impact on the operation of the markets.[40]

These definitions, combined with the testing standards of Proposed Rule 1.81(a) leave no room for error for AT Persons to design and implement algorithmic trading systems. For example, Proposed Rule 1.81(a) requires "testing to identify circumstances that may contribute to future Algorithmic Trading Events," and to conduct back-testing using historical transaction data to identify the same. Essentially, this requires AT Persons to conduct testing so thorough as to identify every possible scenario in which its algorithmic trading systems might cause any slight event, without regard to actual market impact. In fact, it requires that testing prevent events that affect only that AT Person's operations. If an algorithmic trading system causes a future Algorithmic Trading Event, even one that does not affect the market at all, the AT Person is in non-compliance with the testing requirements and subject to enforcement action.

Similarly, Proposed Rule 1.81(b) requires AT Persons to provide for continuous, real-time monitoring of algorithmic trading systems. Aside from the significant costs this will entail in terms of staffing and other resources required, this imposes an impossible standard. The concept of "real-time monitoring" is difficult to define and difficult to meet. The standard should be "near-real-time" - anything else will not be meaningful given the simple fact that systems need time to analyze data. Further, Proposed Rule 1.81(b) requires that staff be able to "identify potential Algorithmic Trading Events." Given the expansive definition of Algorithmic Trading Event, full compliance with this requirement is impossible, and essentially imposes a strict liability standard where an AT Person can be in non-compliance where any slight, non-material event is not identified in real-time.

In sum, as proposed, Regulation AT, and particularly Proposed Rule 1.81, will significantly increase compliance burdens on AT Persons, far beyond that which could reasonably be expected to reduce market risk. Proposed Rule 1.81, as currently constructed, appears to be an attempt to make algorithmic trading risk-free, an impossible proposition.[41]

IV. Conclusion

CTC recognizes that appropriate regulation of automated and algorithmic trading is essential to the safety and soundness of the market. At the same time, the CFTC must recognize that the industry has largely adopted risk control measures that have been successful in mitigating the risks posed by such trading, without CFTC regulation. In addition, the CFTC must become mindful of the destruction to confidentiality and businesses that Regulation AT poses. Further, any efforts to introduce additional regulation should ultimately seek to improve the safe, healthy, robust functioning of the markets, which requires a balance between the

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40 We suggest that the materiality qualifier also apply to "disrupt."

41 Similar issues are raised by the self-trade prevention requirements. Proposed Rule 40.23 requires that DCMs implement self-trade prevention tools to prevent trades between accounts under common control or beneficial ownership. Proposed Rule 40.23(b) permits a DCM to allow certain self-trades in certain circumstances, but this does not include buy and sell orders for accounts with common beneficial ownership that are independently initiated for legitimate business purposes, but which coincidentally cross. Also, the rule does not contain a de minimis exception that would allow a certain percentage of unintentional self-trading. CTC proposes that the rule should be modified so that these common sense allowances are built in.

regulations market participants must follow, the costs of complying with those regulations, and the latitude to innovate for the benefit of all market participants in the future. Accordingly, any regulations the CFTC adopts should be designed to allow space for market participants to continue the success which has already been achieved in this area, rather than burdening and threatening the livelihood of market participants with onerous new requirements that will upset the successful functioning of the markets. Unfortunately, while the goals of Regulation AT are laudable, it largely misses the mark in contributing to the safety and soundness of the markets.

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If you have any questions concerning our comments, please feel free to contact the undersigned. CTC welcomes the opportunity to discuss these issues further with the Commission and its staff.

Respectfully submitted,

Eric Chern
Chief Executive Officer

cc: Honorable Timothy Massad, Chairman
Honorable Sharon Bowen, Commissioner
Honorable J. Christopher Giancarlo, Commissioner