



**January 3, 2011**

Mr. David A. Stawick  
Secretary  
Commodity Futures Trading Commission  
Three Lafayette Center  
1155 21<sup>st</sup> Street, NW  
Washington, DC 20581

Re: Antidisruptive Practices Authority Contained in the Dodd-Frank Wall Street Reform and Consumer Protection Act (CFTC RIN 3038-AD26)

Dear Mr. Stawick:

Better Markets, Inc.<sup>1</sup> appreciates the opportunity to comment on the above-captioned advanced notice of proposed rulemaking and request for comments (the "ANPR") of the Commodity Futures Trading Commission ("CFTC"), the purpose of which is to assist the CFTC in promulgating rules and regulations to meet the requirements of Section 747 of the Dodd-Frank Financial Services Reform Act (the "Dodd-Frank Act").

### **Introduction**

The issue of disruptive market practices is as challenging to the CFTC as it is important to a fair and transparent marketplace. The implementation of the Dodd-Frank Act provides an historic occasion to bring the CFTC's new authority to bear on practices that have plagued the derivatives markets for more than a decade and contributed to the financial crisis of 2008. However, limiting the focus to *historic* disruptive practices would waste the unique opportunity provided by comprehensive financial reform and would fail to achieve the statutory mandate of Dodd-Frank to ensure a fair and equitable marketplace.

The CFTC **must** look to the future of the derivatives markets and foresee the potential for abusive practices as new structures, such as swap execution facilities ("SEFs"), are broadly implemented and the use of designated contract markets ("DCMs") and derivatives clearing organizations ("DCOs") is vastly expanded. Furthermore, the CFTC's rules for derivatives

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<sup>1</sup> Better Markets, Inc. is a nonprofit organization that promotes the public interest in the capital and commodity markets, including in particular the rulemaking process associated with the Dodd-Frank Act.

trading **must** anticipate the interaction between the new trading infrastructure and the rapidly growing technological capabilities of market participants.

The approach to regulation of potentially disruptive trading practices that the CFTC adopts is critical to the success of the implementation of the Dodd-Frank Act. Trading practices that do not contribute to an efficient and transparent market in which businesses can hedge important risks should not be favored. Liquidity that is sufficient to support the basic function of the marketplace is essential. However, liquidity that does not enhance price discovery and efficient hedging is not part of the CFTC's mission under the Dodd-Frank Act.

The CFTC's mission and statutory mandate do not include enabling, allowing or facilitating market practices that are designed to generate profits for those traders able to employ them, particularly if the practices provide no or little useful benefit for the market as a whole. If, on balance, the potential disruption from a practice is material, it cannot be justified merely because traders can profit from it.

The industry, accustomed to an environment of little or no regulation, resists any curbs on their behavior as if they have a right to employ the practices that have been so profitable for them. The enactment of the Dodd-Frank law has dramatically changed that environment and, in many ways, prohibited those practices. The days of the Wild West derivatives practices and markets, where virtually anything goes, are now over. The only thing left to do is get the rules right and then enforce them vigorously.

High-frequency and algorithmic trading, particularly dangerous in the fragmented derivatives markets that will function in an electronic world of SEFs and DCMs, pose a tremendous challenge. Dr. Andrei Kirilinko, the CFTC's newly appointed Chief Economist, has described electronically inter-connected markets as an "eco-system of market participants."<sup>2</sup> There is no doubt that high-frequency and algorithmic trading are considered to be innovations; but so is the ability to drill for oil deep beneath the sea. The regulation of high-speed and algorithmic trading must not follow the path of the regulators charged with protecting the eco-system of the Gulf of Mexico from the dangers of deep-water drilling. As pointed out by Senator Kaufman, clever and complex trading systems can be dangerous even if they are impressive:

My message about high-frequency trading has been straightforward: the technological advances and mathematical algorithms that have allowed computers to trade stocks in millionths of a second, in and of themselves, are neither good nor bad. Indeed, as an engineer, I have a deep appreciation for the importance of technological progress.

But technology cannot operate in a vacuum nor should it dictate how our markets function. Simply put, technological

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<sup>2</sup> Presentation of Dr. Andrei Kirilinko, Technical Advisory Committee Roundtable, October 12, 2010.

developments must operate within a framework that ensures integrity and fairness.

That is why our regulatory agencies are so critically important. Because while technology often produces benefits, it might also introduce conflicts that pit long-term retail and institutional investors against professional traders who are in and out of the market many times a day. As Chairman Schapiro has consistently asserted, including in a letter to me over a year ago, and I quote: "If . . . the interests of long-term investors and professional traders conflict ... the Commission's focus must be on the protection of long-term investors."<sup>3</sup>

The Dodd-Frank Act provides ample authority to the CFTC to meet this challenge. Section 747 requires specific trading behaviors to be regulated, but also grants broad authority to address other disruptive practices:

(5) Disruptive practices. —It shall be unlawful for any person to engage in any trading, practice, or conduct on or subject to the rules of a registered entity that—

(A) violates bids or offers;

(B) demonstrates intentional or reckless disregard for the orderly execution of transactions during the closing period; or

(C) is, is of the character of, or is commonly known to the trade as, "spoofing" (bidding or offering with the intent to cancel the bid or offer before execution).

(6) Rulemaking authority.—The Commission may make and promulgate *such rules and regulations as, in the judgment of the Commission, are reasonably necessary to prohibit the trading practices described in paragraph (5) and any other trading practice that is disruptive of fair and equitable trading.*

(7) Use of swaps to defraud.—It shall be unlawful for any person to enter into a swap knowing, or acting in reckless disregard of the fact, that its counterparty will use the swap as part of a device, scheme, or artifice to defraud any third party. [Emphasis added.]<sup>4</sup>

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<sup>3</sup> Remarks of Senator Ted Kaufman, Senate Floor, September 18, 2010.

<sup>4</sup> Dodd-Frank Act, Section 747

The enumerated trading practices in paragraph (5) are examples, which must be addressed. But the highlighted language makes clear the Congressional intent that the CFTC must explore additional practices that are disruptive of *fair and equitable* trading. Section 747 establishes a clear standard: a marketplace in which *no participant or class of participants enjoys either unfair or unequal advantages over others*.

Thus, the CFTC must *both* look to historical trading behaviors *and* anticipate future behaviors (taking into account the new market infrastructure) that fall below this standard. With that in mind, we respond to each of the questions posed by the ANPR.

## Questions and Comments

*1. Should the Commission provide additional guidance as to the nature of the conduct that is prohibited by the specifically enumerated practices in paragraphs (A-C)?*

Yes. Additional guidance is essential. The enumerated practices in sub-paragraphs (5)(A-C) provide a starting point for the overall effort to regulate disruptive practices. Sub-paragraph (5)(B) is important as a guidepost for the requisite intent underlying behavior which is disruptive: (a) behavior which demonstrates intentional or (b) reckless disregard for orderly execution. Specific intent to disrupt trading is not required; reckless disregard is sufficient. As the CFTC explores trading behaviors that have been employed in the past and anticipates those that may be employed in the future, this sub-paragraph provides the standard of behavior. The way in which market participants employ practices can demonstrate intent or recklessness; *and some practices will so threaten an orderly market that they are inherently reckless*.

Sub-paragraph (5)(C), dealing with “spoofing,” presents specific challenges. As described in the recent roundtable conducted by the CFTC Technical Advisory Committee, it is common among market participants using certain trading practices to frequently place and cancel orders.<sup>5</sup> In particular, high-frequency traders employ this tactic in an attempt to manage around limits on inventories and exploit the algorithms which they use by extracting value from price movements, assuming that they are consistent with their projections and assumptions. It is inevitable that a percentage of the bids or offers made by those employing such practices will be cancelled prior to execution. The CFTC must establish standards to address this practice. There is unquestionably a level at which order cancellation is sufficiently certain to demonstrate intent or recklessness.

In addition, the CFTC must address orders that are partially executed and partially cancelled. The suggestion by participants in the roundtable that partial execution demonstrates a lack of requisite intent is simply not sustainable.<sup>6</sup> It is obvious that partial execution can serve as camouflage for the practice of spoofing. Standards must be established, either through regulation or enforcement procedures, for behavior that demonstrates the requisite intent.

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<sup>5</sup> Technical Advisory Committee Roundtable, October 12, 2010.

<sup>6</sup> Id.

It was suggested in the roundtable referred to above that spoofing is, by definition, impossible in an electronic matching environment because bids and offers cannot be cancelled once they are lifted by another participant.<sup>7</sup> This completely misreads Section 747 and market realities. There is no requirement in Section 747 that cancellation of an order after a match has been established but before execution is an element of the definition of spoofing. Orders placed on an electronic SEF can affect the marketplace even if no participant has lifted the order. Spoofing on an electronic SEF therefore must be prohibited by the CFTC under Section 747.

Importantly, Section 747 does not require any demonstration relating to the price at which the orders, later canceled prior to execution, were placed. This is consistent with the anti-manipulation provisions of the Dodd-Frank Act, which does not require proof of actual market price manipulation.<sup>8</sup> Price should not be added as an element of disruptive practices by regulation.

*2. With respect to the practice enumerated in paragraph (A)—violating bids and offers— how should the provision be applied in the context of electronic trading platforms with pre-determined order-matching algorithms that preclude a trader from executing an order against a quote other than the best one available? In particular, should the provision apply to “buying the board” in an illiquid market?*

Yes. The CFTC must craft regulations in the context of the practical realities of the derivatives markets and with a view to the new market structure. Currently, the derivatives markets are highly balkanized, with many related but distinct markets which are, individually, highly illiquid. In the new market structure, there will likely be multiple SEFs, many of which will be dedicated to the service of narrow markets with extremely distinctive trading characteristics.

In this environment, the effect of “buying the board” can be particularly dramatic and can have complex, knock-on effects on other related marketplaces. Algorithmic trading techniques exploit price moves, including ones generated by disruptive techniques, across multiple, historically price-correlated markets. The illegitimate prices are then transmitted across multiple markets, with the same results as a cough in a crowded room. In this way, order-matching algorithms can be exploited with difficult-to-discern impacts on other distinct markets and SEFs. The provision should, without a doubt, apply to buying the board in an illiquid market.

*3. How should the Commission distinguish between orderly and disorderly trading during the closing period as articulated in paragraph (B)? What factors should a fact finder consider in this inquiry?*

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<sup>7</sup> Id.

<sup>8</sup> Dodd-Frank Act, Section 753.

Again, the new market structure will present challenges because of multiple SEFs employing different procedures. One key factor for consideration is the participant's other positions across all trading venues. If a trader behaves suspiciously at close, by placing a large order or buying the board, it must be established whether they were just initiating a new position or liquidating an existing position, or whether they have another position that is the real reason they're placing the order (i.e., to affect the settlement price). (Note: This should apply not just to the actual market close, but to any period against which a swap settles, as discussed in detail below.)

*4. How should "orderly execution" be defined? How should the closing period be defined? Should the definition of closing period include:*

*a. Daily settlement periods?*

*b. Some period prior to contract expiration?*

*c. Trading periods used to establish indices or pricing references?*

The question itself suggests the only appropriate answer: the closing period is significant because it is a time in which trading activity has a particularly strong impact on market prices. That logic should be applied to other price-sensitive periods in the new marketplace under the Dodd-Frank Act.

In the new marketplace, the CFTC's regulations must address multiple classes of swaps with disparate valuation regimes. The market will be characterized by multiple, specialized SEFs. Price-sensitive activities will not be limited to market closing periods. ***Disruptive practices targeting price-sensitive activities can affect indices and critical price calculations used for trading and clearing. There is no question that the concept of closing period should encompass all price-sensitive activities such as settlement periods, periods prior to contract expiration and trading periods used to establish indices or pricing references.***

*5. Should the Commission recognize that a trading practice or conduct outside of the closing period is actionable so long as it "demonstrates intentional or reckless disregard for the execution of transactions during the closing period?"*

*6. Should (B) extend to order activity as well as consummated transactions?*

Sub-paragraph (B) of Section 747 does not specify that trading practice or conduct that is intended to be prohibited coincide temporally with the closing period. It also does not specify that the trading practice or conduct must be a consummated transaction.

Question 5 describes an activity that potentially affects the execution of transactions during the closing period. It is, of course related to Question 4, which approaches the issue from a different direction, i.e., the breadth of the concept of order period. The points made in

response to Question 4 apply equally in response to Question 5.

Question 6 describes order activity during the closing period that does not result in consummated transactions.

The new market structures and the market participants' new practices (characterized as "innovations" by those who operate using these techniques) will open up numerous possibilities for gaming the derivatives markets. *How* disruption of the market is achieved is far less important than the disruption that results. The CFTC must take a broad view of the activities which may have disruptive results. Activities which do not coincide temporally with the closing period and which are not consummated transactions are clearly within the plain meaning of sub-paragraph (5)(B) and *must be actionable*.

Even if the trading practices or conduct described in the questions were not clearly within the scope of sub-paragraph (5)(B), they are clearly within the authority of the CFTC to regulate under paragraph (6) as "reasonably necessary to prohibit the trading practices described in paragraph (5) and any other trading practice that is disruptive of fair and equitable trading."<sup>9</sup>

*7. Should executing brokers have an obligation to ensure that customer trades are not disruptive trade practices? If so, in what circumstances? What pre-trade risk checks should executing brokers have in place to ensure customers using their automated trading systems, execution systems or access to their trading platforms do not engage in disruptive trade practices?*

Executing brokers should have an obligation to ensure that customer trades are not disruptive trade practices. Executing brokers are often essential to high-frequency and algorithmic trading strategies. The integrity of the markets and the safety of the executing brokers themselves are enhanced by this obligation. In reference to this approach, the CFTC should reference the work of the Securities and Exchange Commission in its recent proposed rule regarding "Risk Management Controls for Brokers or Dealers with Market Access."<sup>10</sup> In that proposed rule, the SEC stated:

Specifically, the proposed rulemaking would require that brokers or dealers with access to trading securities directly on an exchange or [alternative trading system], as a result of being a member or subscriber thereof, establish, document, and maintain a system of risk management controls and supervisory procedures that, among other things, are reasonably designed to systematically limit the financial exposure of the broker or dealer that could arise as a result of

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<sup>9</sup> Dodd-Frank Act, Section 747.

<sup>10</sup> Securities and Exchange Commission, Proposed Rule – Risk Management Controls for Brokers or Dealers with Market Access, Release No. 34-61379; File No. S7-03-10 \; RIN 3235-AK53.

market access, and ensure compliance with all regulatory requirements that are applicable in connection with market access.<sup>11</sup>

*8. How should the Commission distinguish “spoofing,” as articulated in paragraph (C), from legitimate trading activity where an individual enters an order larger than necessary with the intention to cancel part of the order to ensure that his or her order is filled?*

Our response to Question 1 discusses the challenges relating to “spoofing.”

*9. Should the Commission separately specify and prohibit the following practices as distinct from “spoofing” as articulated in paragraph (C)? Or should these practices be considered a form of “spoofing” that is prohibited by paragraph (C)?*

- a. Submitting or cancelling bids or offers to overload the quotation system of a registered entity, or delay another person’s execution of trades;*
- b. Submitting or cancelling multiple bids or offers to cause a material price movement;*
- c. Submitting or cancelling multiple bids or offers to create an appearance of market depth that is false.*

The language of sub-paragraph (5)(C) is extraordinarily broad. It covers activity that “is, is of the character of, or is commonly known to the trade as, ‘spoofing.’”<sup>12</sup> The ultimate intended result is not specified. Overloading a quotation system, delaying another person’s execution of trades, causing a material price movement and creating a false appearance of market depth are all purposes which frustrate the Dodd-Frank Act’s basic goal of a transparent, fair marketplace with broad access. Practices such as “flash orders” and overload of orders with no intent to execute, all intended to game the electronic trading systems for an advantage, in the equities markets have been reported.<sup>13</sup> Therefore, these activities fall within the scope of sub-paragraph (5)(C).

Even if the trading practices or conduct described in the question were not clearly within the scope of sub-paragraph (5)(C), they are clearly within the authority of the CFTC to regulate under paragraph (6) as “reasonably necessary to prohibit the trading practices described in paragraph (5) and any other trading practice that is disruptive of fair and equitable trading.”<sup>14</sup>

*10. Does partial fill of an order or series of orders necessarily exempt that activity from being defined as “spoofing”?*

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<sup>11</sup> Dodd-Frank Act, Section 747.

<sup>12</sup> Id.

<sup>13</sup> See, e.g. Graham Bowley. “The New Speed of Money, Reshaping Markets,” The New York Times, January 1, 2011.

<sup>14</sup> Dodd-Frank Act, Section 747.



*11. Are there ways to more clearly distinguish the practice of spoofing from the submission, modification, and cancelation of orders that may occur in the normal course of business?*

As discussed earlier in our response to Question 1, it is obvious that partial execution can serve as camouflage for the practice of spoofing. Submission, modification and cancelation of orders in the ordinary course of business may arguably be permissible activities. However, a trader may conduct business in such a way that the activity inherently amounts to a reckless disregard for the orderliness of the marketplace. If the activity constitutes a trading practice because it is consistent or integral to a strategy (such as high-frequency trading in which cancelation is an expected outcome for a substantial percentage of orders placed) it should be addressed by regulation. In that case, the cancellations are not in the ordinary course of business, but are rather inherent in that particular trading strategy. Allowing a strategy in a single market can create more widespread effects than anticipated because algorithms read the illegitimate prices in one market and quickly spread their effects to other, historically price correlated markets.

Also, as mentioned above, the significance of the specific trading strategy to a marketplace that fulfills its basic purposes of transparent and efficient hedging of legitimate business risks should be considered. A strategy that is virtually certain to cause disruption because of cancellations and does not provide actual liquidity or price discovery needed to achieve the fundamental purpose of the market should be prohibited.

Standards must be established, either through regulation or enforcement procedure precedents, to establish standards for behavior that eliminate inherently risky and disruptive trading strategies from the conduct of the normal course of business.

*12. Should the Commission specify an additional disruptive trading practice concerning the disorderly execution of particularly large orders during periods other than the closing period? If so, at what size should this provision become effective and how should the Commission distinguish between orderly and disorderly trading?*

As discussed above in response to Question 4, the order period should encompass all price sensitive activities. Another approach is to identify those activities and address orders made during the relevant periods.

In terms of the size, the issue is materially relative to the market in question. Market characteristics vary dramatically in terms of size and valuation regimes. This must be addressed on a market-specific basis.

It is important to note that size is not the sole criterion. Size is significant insofar as it relates to the practice and causes it to ignite price momentum. Patterns of behavior and

aggressiveness of price are significant as well as size. A focus should be to encompass “hot potato” volume, as described by Dr. Kirilinko.<sup>15</sup>

*13. Should the Commission specify and prohibit other additional practices as disruptive of fair and equitable trading?*

Yes. Privileged access to data feeds is a practice that is massively *disruptive of fair and equitable trading*. It is the modern-day version of front-running which is clearly disruptive.

The increased use of SEFs and DCMs to facilitate transactions opens the door to rapid market data availability for certain privileged market participants. The Chicago Mercantile Exchange is reported to be moving forward with a plan to facilitate limited server co-location with its Globex trading platform systems.<sup>16</sup> Electronic trading actually increases certain trading advantages, particularly related to algorithmic and high-frequency trading. Purchased preferential access to rapid data feeds, like the Globex trading co-location facility, should be anticipated and prohibited.

Any form of unequal access constitutes an anti-competitive advantage passed from SEFs and DCMs to selected market participants that are in a position to use preferential access to secure a trading advantage. The value of this advantage is enhanced by the fragmented nature of derivatives markets and the likelihood of multiple, market-specific SEFs. Given the extraordinary concentration of trading volumes in a narrow set of large firms in the derivatives market, the potential for conflicts of interest and predatory behavior is great.

Section 747 of the Dodd-Frank Act articulates a goal: the prohibition of trading practices that are disruptive of fair and equitable markets.<sup>17</sup> ***This simply cannot be achieved if access to information flows to and from SEFs and DCMs is sold to the highest bidder or otherwise granted to a favored few at the expense of all others.***

*14. Should the Commission articulate specific duties of supervision relating to the prohibited trading practices articulated in paragraphs (A–C) (as well as any other trading practice that the Commission determines to be disruptive of fair and equitable trading) to supplement the general duty to supervise contained in Commission Regulation 166.3? To which entities should these duties of supervision apply?*

Supervision is critical. It must be the responsibility of individuals who make decisions at a strategic level, since the prohibited practices often include complex relationships between the practices and prices in other markets. The responsibility must lie with the officer that has the most senior level authority over all trader activity.

*15. Should the Commission consider promulgating rules to regulate the use of algorithmic or automated trading systems to prevent disruptive trading practices? If so, what kinds of rules should the Commission consider?*

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<sup>15</sup> Presentation of Dr. Andrei Kirilinko, Technical Advisory Committee Roundtable, October 12, 2010.

<sup>16</sup> Graham Bowley. “The New Speed of Money, Reshaping Markets,” The New York Times, January 1, 2011.

<sup>17</sup> Dodd-Frank Act, Section 747.

*16. Should the Commission consider promulgating rules to regulate the design of algorithmic or automated trading systems to prevent disruptive trading practices? If so, what kinds of rules should the Commission consider?*

*17. Should the Commission consider promulgating rules to regulate the supervision and monitoring of algorithmic or automated trading systems to prevent disruptive trading practices? If so, what kinds of rules should the Commission consider?*

*18. Should the Commission promulgate additional rules specifically applicable to the use of algorithmic trading methodologies and programs that are reasonably necessary to prevent algorithmic trading systems from disrupting fair and equitable markets? If so, what kinds of rules should the Commission consider?*

The depth of the challenge faced by the CFTC relating to high-frequency and algorithmic trading practices was framed by Commissioner O'Malia:

I would like to quote Larry Leibowitz, the Chief Operating Officer of the New York Stock Exchange, who appeared in the 60 minutes story. I believe Mr. Liebowitz accurately captured our mission here today when he said, in reference to high-frequency trading: "We have to do a better job. We have to make changes that make sense that give people more confidence in the market, add more transparency and make people feel like this is a place I can trust my retirement savings to."<sup>18</sup>

Commissioner Chilton also pointed out the significance of regulating high-frequency and algorithmic trading:

It is now our challenge and our responsibility to ensure that we get this right – Congress gave us the architectural plans, and the hammers and nails, and now we have to build the structure. Developing appropriate rules to regulate high-frequency trading will ultimately protect American consumers and ensure that our markets continue to serve their intended purposes.<sup>19</sup>

Commissioner Chilton observed that the concern is not simply the direct disruption of markets that can be caused by high-frequency and algorithmic trading, but also the

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<sup>18</sup> Commissioner Scott D. O'Malia, Opening Remarks, Technical Advisory Committee Roundtable, October 12, 2010.

<sup>19</sup> Commissioner Bart Chilton, "Rein in the Cyber Cowboys," Financial Times, September 6, 2010.

inevitable human errors that can be compounded by automated and pre-programmed trading systems that cannot distinguish intentional acts from human folly.<sup>20</sup>

SEC Chairman Shapiro's expressions of concern regarding high-frequency and algorithmic trading are also instructive:

[A]re algorithms programmed with appropriate throttles that prevent them from operating in an uncontrolled manner? An out-of-control algorithm can cause serious losses to the firm that uses it, it can also cause serious disruptions that harm market stability and shake investor confidence.<sup>21</sup>

High-frequency and algorithmic practices automate trading activities so that they respond to objective circumstances in a pre-ordained way and do so in time frames that defy human perception. Dr. Andrei Kirilinko, the CFTC's newly appointed Chief Economist, in discussing the causes of the "flash crash" on May 6 of last year, described an "ecosystem of market participants" which interacted through algorithms and high-speed trading systems to create a serious stock market anomaly (which may have been even more devastating had it occurred when European markets were still open when it occurred).<sup>22</sup>

The May 6 flash crash must not be seen as an isolated incident. Since its occurrence, there have been a number of smaller "flash crashes" related to single stocks.<sup>23</sup> These have not yet been explained. However, they are evidence that another, even more damaging market-wide event may be in our future.

The first step in the process of crafting regulation must be to address the value, or absence of value, of these practices to the marketplace. Undoubtedly, traders who use these techniques can derive tremendous profits from them; they will resist any limitations to protect these profits. **But this fact is irrelevant to the structuring of regulation.** The purpose of regulating disruptive practices is to achieve fair and equitable trading, not to protect or promote profitable, but dangerous, trading practices of those able to take advantage of them.

A recent study describes the interaction of high-frequency and algorithmic trading with the marketplace.<sup>24</sup> The study observes that high-frequency trading intermediates between market makers and liquidity traders. Its effect is to increase the price paid by liquidity traders when they buy and to decrease the price received when they sell. High-frequency trading increases price volatility. As a result, market makers enjoy higher liquidity

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<sup>20</sup> Id.

<sup>21</sup> Mary L. Shapiro, Chairman, Securities and Exchange Commission, Remarks before the Securities Traders Association, September 22, 2010.

<sup>22</sup> Presentation of Dr. Andrei Kirilinko, Technical Advisory Committee Roundtable, October 12, 2010.

<sup>23</sup> Graham Bowley. "The New Speed of Money, Reshaping Markets," The New York Times, January 1, 2011.

<sup>24</sup> Cartea, A. and Penalva, J., "Where is the Value in High-Frequency Trading," Universidad Carlos II de Madrid, November 2, 2010.

premiums. High-frequency trading increases volume, but is neither driven by fundamentals nor does it constitute noise trading.

This is completely consistent with Dr. Kirilinko's analysis of the interaction of high-frequency trading and algorithmic trading in the flash crash.<sup>25</sup> He points out the key distinction between adding volume and adding liquidity. High-frequency traders both add and subtract liquidity as their programs reverse buy/sell directions and they re-calibrate inventories according to programmed procedures. Liquidity is provided by market makers, who were "run over by the price moves" on May 6<sup>th</sup>, an inherent risk in making a market in a marketplace dominated by high-frequency traders.

High-frequency and algorithmic trading can damage the perceived fairness and reliability of markets, which will reduce liquidity and otherwise impair the proper functioning of the market. For example, since the flash crash, ordinary investors have withdrawn more than \$90 billion from their stock mutual funds.<sup>26</sup> Importantly, it's not just ordinary investors who are affected by such practices. They are also impacting institutional investors:

Bigger institutional investors... [are becoming] suspicious as well. They say, "I still feel like someone is screwing me" .... Even though they have benefitted from shrinking trading costs ... "trading feels different than it used to."<sup>27</sup>

High-frequency trading opens the door to schemes that take advantage of market advantages that bear no relationship to price. These behaviors and their consequences have already been experienced in the equities markets, which provide fair warning of potential issues as derivatives markets mature.<sup>28</sup> Equities markets have experienced activities such as fake quotes to take advantage of fee credits-for-quotes schemes and programmed direction of volume to various trading platforms to take advantage of liquidity rebates (known in the trade as "rebate harvesting algorithms").<sup>29</sup>

The CFTC must consider several points in regard to the utility of high-frequency trading. Does it really add liquidity to the market, or merely volume? To the extent liquidity is added, is it liquidity that is valuable and, even if valuable in some narrow sense, at what cost? Senator Kaufman made this point succinctly in his letter to Chairman Shapiro: "Liquidity, speed and the role of arbitrage functions cannot be the end of the discussion. For the markets to have credibility and investors to have confidence, the SEC must act urgently to restore a level playing field for investors."<sup>30</sup>

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<sup>25</sup> Presentation of Dr. Andrei Kirilinko, Technical Advisory Committee Roundtable, October 12, 2010.  
<sup>26</sup> Graham Bowley. "The New Speed of Money, Reshaping Markets," The New York Times, January 1, 2011.  
<sup>27</sup> Dennis Berman, "A Market Solution That Put Investors In a Fix," Wall Street Journal, August 24, 2010  
<sup>28</sup> See New York Stock Exchange discussion of payment for order flow by the CBOE in comment letter on SEC Release No. 34-62445, available at: <http://sec.gov/comments/s7-21-09/s72109-163.pdf>.  
<sup>29</sup> Fred Federspiel and Alfred Berkely, High-Frequency Trading and the Evolution of Liquidity in US Markets, August 25, 2009 available at <http://www.advancedtrading.com/exchanges/219401479?pgno=1>  
<sup>30</sup> Letter from Senator Ted Kaufman to SEC Chairman Shapiro, August 21, 2009.

Certainly price availability is helpful to a market the purpose of which is to provide for the efficient, reliable and fair hedging of commercial risk. But liquidity that is added and subtracted and available in periods measured in nanoseconds is of doubtful value. The direct consequences - increased volatility and risk to market makers (which do add meaningful liquidity) - must be considered carefully. The unintended consequences, as algorithms mis-read market occurrences and high-frequency technologies kick in, are even more chilling.

We believe that high-frequency and algorithmic trading must be curbed or eliminated in the regulations under Section 747 of the Dodd-Frank Act. The potential adverse consequences of these practices are particularly great in derivatives markets which, though somewhat inter-related, are balkanized, narrow and easily disrupted. Algorithmic trading techniques exploit price moves, including ones generated by disruptive techniques, across multiple, historically price-correlated markets. As described above, the illegitimate prices are transmitted across multiple markets, with the same results as a cough in a crowded room. As observed by Andrew Lo, director of the [Laboratory for Financial Engineering](#) at M.I.T:

It is a technological arms race in financial markets and the regulators are a bit caught unaware of how quickly the technology has evolved. Sometimes, too much technology without the ability to manage it effectively can yield some unintended consequences. We need to ask the hard questions about how much of this do we really need. It is the Wild, Wild West in trading.<sup>31</sup>

The CFTC should start with requiring that bids be for minimum durations and that positions be held for minimum durations. Mr. Lo has suggested the installation of regulatory “traffic lights” to address the potential trading traffic jams.<sup>32</sup> For instance, these rules might vary depending on asset class and market structure, but the variation should range between 5 and 10 seconds at a minimum. Legitimate algorithmically driven trading strategies can be implemented in this environment; but high-frequency volume which benefits only the trader, adds minimal value to the marketplace and subjects the market to tremendous risks would be curbed.

*19. Should algorithmic traders be held accountable if they disrupt fair and equitable trading? If so, how?*

The standards of Section 747 of the Dodd-Frank Act are adequate to this task. As described above, the standard is intentional or reckless behavior. If a trader employs an algorithm with reckless disregard for the potential of market disruption, that trader should be held accountable.

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<sup>31</sup> As quoted in Graham Bowley. “The New Speed of Money, Reshaping Markets,” The New York Times, January 1, 2011.

<sup>32</sup> Id.

**Conclusion**

The regulation of disruptive practices is essential to the creation of a market which functions fairly and equitably. We appreciate the challenge presented by a marketplace, historically impaired by disruptive practices, asymmetrical market power and manipulation. The further challenge of anticipating disruptive activities in the context of a changing structure is indeed daunting.

We hope these comments are helpful in your promulgation of Proposed Rules.

Sincerely,



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