



February 22, 2011

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

Re: Core Principles and other Requirements for Designated Contract Markets  
(CFTC RIN 3038-AD09)

Dear Mr. Stawick:

Better Markets, Inc.<sup>1</sup> appreciates the opportunity to comment on the above-captioned proposed rules (the “Proposed Rules”) of the Commodity Futures Trading Commission (“CFTC”), the purpose of which (among other things) are to establish standards for compliance by designated contract markets (“DCMs”) with certain Core Principles, all as required by or pursuant to provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”).

## Introduction

DCMs occupy a central role in the derivatives markets which is increasingly important to the American economy. They have evolved from the open-outcry pits, which were dominant only a few years ago, into sophisticated electronic systems in which masses of data flow at real-time speeds. Speed of communication, no longer constrained by the human voice, is the most obvious development. But instantaneous communication also enables a web of transactional relationships and a cyber-marketplace which can accommodate infinitely more participants than a trading pit. 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>

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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.

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

Off-exchange electronic trading, pioneered by the Enron Corporation and perfected by the largest financial institutions and oil companies (which sponsored the development of the Intercontinental Exchange), now constitutes a regulated element of the marketplace: swap execution facilities ("SEFs").

SEFs have not supplanted the role of DCMs. Listed contracts which are traded exclusively on DCMs are far more integrated into the all-important physical markets for energy, agricultural products and metals, as well as financial products, than ever before. The following characteristics of current markets illustrate this integration:

- Producers and consumers of commodities continue to hedge the price risks inherent in their businesses. Many of the contracts for purchase and sale of these commodities reference futures markets prices as a price setting mechanism. Because of this and other reasons, futures prices govern delivery prices, rather than the other way around, for a significant portion of the marketplace.
- Futures price volatility has become a chronic condition of the futures markets as massive amounts of funds flow into the market and speculative market share increases dramatically (speculating predominating in many markets in which hedging dominated a few years ago). For real-world producers, this means that the cost of hedging price risk has increased to unprecedented levels because margins, which are driven by volatility, have sharply increased. The resulting increased cost of their businesses finds its way to the American consumer, which is effectively ***a volatility tax picked from the pockets of consumers by financial intermediaries.***
- The advent of index funds, which roll over their portfolios by selling the nearby month contracts and buying the second nearby and longer durations, contribute to a chronic price contango, reversing the normal backwardation of commodities futures prices in which prices ascribed to shorter durations are generally lower than longer durations. As a result, real world delivery markets have been conditioned to expect prices to increase.

These and other factors illustrate the fallacy of the assertion by certain market participants that the DCMs' futures markets exist in a bubble and do not affect prices paid by consumers. The public has suffered from high and volatile prices at the gasoline pump and the grocery store in recent years. It is easy to see why market participants who resist position limits and other rules of the road to be administered and enforced by DCMs are biased in their view of the effect of the futures markets on prices paid by consumers.

At the same time, the DCMs must deal with another type of market participant, one that has no interest whatsoever in fundamental price. These are market traders who use high-frequency and algorithmic practices in automated trading systems that respond to

objective circumstances in a pre-ordained way and do so in time frames that defy human perception.

A major goal of high frequency traders (“HFTs”) is to take advantage of trading rules of exchanges and electronic markets, often using order and cancellation strategies to detect the motivations of other market participants and gaming the rules based on this knowledge. If an HFT can detect a large position being piecemealed into the market, it can position itself in front of the trade, buy and immediately sell to the market, all within a very short period of time.

A recent study describes the interaction of high-frequency and algorithmic trading in the marketplace.<sup>3</sup> The study observes that high frequency trading intermediates between market makers and liquidity traders. It increases the price paid by liquidity traders when they buy and decreases the price received when they sell. High-frequency trading increases price volatility. As a result, market makers enjoy higher liquidity premiums. High-frequency trading increases volume, but is neither driven by fundamentals nor does it constitute noise trading. High-frequency trading is an anathema to the efficient markets paradigm because it actually increases volume but does not provide liquidity or decrease volatility.

This is completely consistent with Dr. Kirilinko’s analysis of the interaction of high-frequency trading and algorithmic trading in the May 6, 2010 “flash crash.”<sup>4</sup> He points out the key distinction between adding volume and adding liquidity. ***On a net basis, high-frequency traders add no liquidity.*** Instead they intermediate in nanosecond intervals between liquidity traders and the true sources of liquidity. Their strategies 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, an inherent risk in making a market in a marketplace dominated by high-frequency traders.

High-frequency trading opens the door to schemes which take advantage of market rules and processes which 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>5</sup> Equities markets have experienced activities such as fake quotes to take advantage of fee credits-for-quotes

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<sup>3</sup> Cartea, A. and Penalva, J., “Where is the Value in High Frequency Trading,” Universidad Carlos II de Madrid, November 2, 2010.

<sup>4</sup> Presentation of Dr. Andrei Kirilinko, Technical Advisory Committee Roundtable, October 12, 2010.

<sup>5</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>.

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>6</sup>

In markets dominated by enormous speculation and HFTs, far from becoming irrelevant, DCMs have come to occupy a role which is more important to the nation’s economic health than ever.

### **Summary of Comments**

The Proposed Rules reflect an exhaustive and largely successful effort to translate the Core Principles applicable to DCMs under the Dodd-Frank Act. In particular, the rules establishing a minimum centralized market trading requirement restore the integrity of DCMs as vehicles for price discovery. This is done in spite of resistance from market participants accustomed to using artifices to secure clearing for off-exchange contracts that have no real relation to a traded contract market.<sup>7</sup>

Our comments focus on the Core Principles in the context of an increasingly automated marketplace:

- Certain practices associated specifically with HFTs must be included as abusive practices which must be prohibited by DCMs.
- Risk controls must incorporate, not only market pauses and halts based on circumstances which indicate imminent threats, but also “speed limits” which can prevent those threats from arising in the first place.
- Data recordation and reporting must be broadened to encompass information that is relevant in the world of HFTs.
- Pre-trade data must be available to market participants on a fair and equitable basis, with no one granted privileged access in exchange for payments or volume commitments.

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<sup>6</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>7</sup> Proposed Rules, Section 38.502.

## Restriction of High Frequency and Algorithmic Trading

### *HFT as an Abusive Trading Practice*

A number of provisions in the Proposed Rules are relevant to issues raised by HFTs. At the center of these issues is the Proposed Rule which prohibits abusive trading practices:

A designated contract market must prohibit abusive trading practices on its markets by members and market participants.... Specific trading practices that must be prohibited by all designated contract markets include front-running, wash trading, prearranged trading, fraudulent trading, money passes, and any other trading practices that a designated contract market deems to be abusive. In addition, a designated contract market also must prohibit any other manipulative or disruptive trading practices prohibited by the Act or by the Commission pursuant to Commission regulation.<sup>8</sup>

It is unclear whether any of the practices associated with HFT will be prohibited by the CFTC in its final rule on disruptive practices. We have discussed this extensively in our comment letter on the proposed version of that rule.<sup>9</sup>

If these practices are not dealt with in that rule, they must be dealt with here, or the statutory purpose of DCMs will be defeated.

Described below are four HFT practices that must be included within “fraudulent trading” or must be added to the above list. Each of these is connected to market intelligence tactics commonly used by HFT to discover hidden liquidity, primarily the intent of market participants to execute plans to acquire or dispose of large positions by a series of smaller trades. A liquidity trader (“LT”) wishing to transact a large position may well want to transact in tranches to avoid moving market prices against it. One way that an HFT can detect this is simply to watch for orders that are filled and then re-emerge. The speed of their systems can enable them to perceive this situation and act on it more quickly. Of course, LTs that are aware that HFTs are monitoring the activity employ disguises in the form of random quantities and timing.

But HFTs also use the process of “poking” or “pinging.” This tactic involves placing orders, often immediate-or-cancel orders, just inside the bid/ask spread to measure the motivation of LTs in the market. For example, in a market with a spread of 5.00/5.20, an

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<sup>8</sup> Proposed Rules, Section 38.152.

<sup>9</sup> Better Markets, Inc., Comment Letter dated January 3, 2011 regarding CFTC Notice of Proposed Rulemaking, “Antidisruptive Practices Authority Contained in the Dodd-Frank Wall Street Reform and Consumer Protection Act” (CFTC RIN 3038-AD26).

HFT might place an order at 5.01 which is canceled immediately if the ping for information comes back empty.

A variation is to walk orders in a direction from the mid-market for the same purpose. In our same market, the HFT might place the initial immediate-or-cancel order at 5.10 and thereafter at 5.09 and so on until information is received. This would measure the intensity of the motivation of the LT.

These and other intelligence gathering tactics are designed to set the stage for tactics designed to extract value by using a miniscule speed advantage based on the rules of the trading road, specifically priority given to the first-in-time best bid or offer.

Exploiting a Large Quantity or Block Trade. The presumption is that an HFT has detected an LT which seeks to transact a large position in small increments. In the following, the LT is assumed to be a seller, but the tactic works in both directions. The HFT also detects that market makers do not have particularly large orders on the books of the DCM. The assumed bid/ask spread is initially 5.00/5.20.

The HFT can exploit its speed to alter market conditions in a way that encourages buyers to accept a slightly higher price and sellers a slightly lower price:

- The first step is for the HFT to cancel all of its buy orders which have not been executed.
- It then posts sell offers (which add to the apparent selling pressure perceived by market participants) to clear all posted buy orders on the book.
- It then positions itself as the first in the queue of buyers at a lower price than the apparent LT limit price. In our case, assume 5.18. All of this happens before market makers perceive the increased selling pressure and adjust prices so that market maker offers will sit behind the HFT offers in the queue.
- LT sees that the market to sell at 5.20 is not available and that it can only sell at 5.18, which it does.
- Because it is at the front of the queue, the HFT is first to perceive when the selling pressure subsides as the LT's need to sell has been satisfied. At that moment, the HFT places a sell order in between higher than the posted buy price of 5.18, say 5.19.
- The market maker ("MM") perceives a turn in the market and becomes a buyer at, for example, 5.19.
- HFT sells the position acquired at 5.18 to the MM at 5.19.

The HFT has acted on the information that the LT had a position large enough that the profit from the purchase at 5.18 and sale to the MM at 5.19 is greater than the loss on the initial purchase at 5.20 (which allowed the HFT to jump the queue) and sale to the market maker at 5.19. The advantages of the HFT in this case are:

- The information gathered by pinging at high speed that the selling pressure was great enough to offset losses anticipated from clearing out all buy orders on the book.
- The ability to clear out all buy orders and jump to the head of the buying queue at a new price before anyone else could act.
- The ability to rapidly place a sell offer that created profit but would be acted on by market makers before any market adjustments were possible.

This tactic is an analog to traditional concepts of front-running. In the past, front-running was enabled by information regarding a market participant's order which was misused by a trader to position itself in front of the order. The difference here is that the HFT gathers the information by poking and pinging the market to estimate the motivation of the LT rather than getting a tip from a broker or other market participant. The results are the same: the LT and the market maker have received less from their trading than they might have because of the HFT's manipulation of the market's dynamics and trading rules, with no concern for fundamental values. In both cases, the front runner and the HFT depend on the LT behaving as suggested by the information from the tip or the pinging, respectively.

Price Spraying. HFTs use a more aggressive tactic based on information regarding large trades which are transacted in smaller orders. If the HFT detects a series of buy orders, for instance, it may simply buy the market. It then uses a series of sell-or-cancel orders to discover the LT's upper price limits. The HFT then positions itself at the front of the queue at the LT's price limit and simply sells at that price realizing profit between its purchase prices and the LT's price limit.

The same technique can be used against the class of all LTs that are likely to trade in a price direction based on some news or other information. In this case, the HFT uses the spray of orders to detect levels of upper price limits in a more complex, but similar, strategy.

This is also a form of front-running. The advantages to the HFT are the information on motivation derived from early acquisition of information on the LT's buy orders, the ability to rapidly buy the market before others can react to the information and the use of a spray of sell and cancel orders to find the optimal price level to re-establish the bid side of the market at the point it can dominate.

The purchase of the market ahead of the LT's price limit is a form of buying the board.

And, the exploratory spray of orders is a form of spoofing because, inevitably, some number of the orders is placed with no intention of transacting.

Front-running, buying the board and spoofing, among other tactics, would all be prohibited if individuals were doing them. The fact pre-programmed computers engage in these practices should not change that.

Rebate Harvesting. This tactic may not be designed to be profitable based on price. DCMs (and SEFs) offer rebates based on transacted volume to attract market makers. HFTs are able to transact instantaneously buy and sell orders at the same all-in price, or even at a loss which is less than the value of the rebate. The HFT earns the rebate by simply turning over the trade in a round trip transaction. The exchange or SEF has unintentionally paid for volume, but not liquidity. The ultimate buyer and seller would have transacted but for the intervention of the HFT which was able to execute the two trades in "real-time."

The problem is that the market as a whole will not perceive the motivation of the HFT. It will appear that the liquidity in the market is extraordinary, when in fact the trading by the HFT had no liquidity implications.

Layering the Market. This involves the placement of multiple bids and offers at different prices and quantities. It generates an enormous volume of orders but cancellation rates as high as 90 percent. While it can facilitate rebate harvesting, it can also be used to generate phantom depth and liquidity of the market which can induce a belief by other market participants that there is price momentum. Some of the other participants may draw this conclusion based on algorithms of their own.

Once trading behavior is induced, the HFT can use other tactics similar to those used in the case of large positions transacted in a series of orders to buy or sell ahead of the direction of the momentum.

The HFT's advantages are to be able to place and cancel multiple orders quickly and to position itself as first in the queue at a strategic price level ahead of the momentum.

This is a direct analog to spoofing. The HFT has no intent or desire to transact on the multiple bids and offers. It is very certain that most (say 90 percent) will be cancelled. The purpose is to induce price momentum and suggest a depth of liquidity which simply does not exist.

### *Risk Controls for Trading*

The Proposed Rules mandate certain risk control mechanisms:

The designated contract market must establish and maintain risk control mechanisms to reduce the potential risk of market



disruptions, including but not limited to market restrictions that pause or halt trading in market conditions prescribed by the designated contract market.<sup>10</sup>

These requirements are extremely useful, but incomplete. They are designed to act as stop lights to regulate trading flows based on circumstances which indicate imminent danger. The addition of a "speed limit" is required to serve as a buffer against the potential for an uncontrolled spiral of disruption fueled by HFT.

The CFTC should start with requiring that bids be for minimum durations and that positions be held for minimum durations. 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 that benefits only the trader adds minimal value to the marketplace and subjects the market to tremendous risks would be curbed.

#### *Trading Records and HFT*

The proposed rules include a number of provisions relating to records that must incorporate concepts related to HFT.

Publication of Market Data. The Proposed Rules require that certain market data be recorded by a DCM each day and be made available to the public.<sup>11</sup> This information should include the number of orders and cancellations for futures, options and swaps, organized within those categories in segments which are used for price recordation and reporting. This will indicate levels of HFT activity within market segments. Paired with real-time reporting of data (including disaggregation of esoteric swaps into their component risks and use of hedge equivalent prices to value less liquid swaps), the public will have a clear view of derivatives markets for the first time.

Automated Trade Surveillance. The Proposed Rules require the maintenance of an automated trade surveillance system which records orders, modifications of orders and cancellations.<sup>12</sup> Each of these items of data must be time-stamped at intervals consistent with the capabilities of HFTs that use the DCMs' systems to transact.

Real-time Market Monitoring. Each DCM is required to conduct real-time market monitoring under the Proposed Rules.<sup>13</sup> This process must include monitoring of orders and cancellations, each time-stamped at intervals consistent with the capabilities of HFTs which use the DCMs systems to transact. This will enable the DCM to monitor the implementation of HFT strategies which are abusive.

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<sup>10</sup> Proposed Rules, Section 38.255.

<sup>11</sup> Proposed Rules, Section 16.01.

<sup>12</sup> Proposed Rules, Section 38.156.

<sup>13</sup> Proposed Rules, Section 38.157.

Audit Trail. The Proposed Rules require maintenance of records of customer orders and their disposition, whether filled, unfilled or cancelled.<sup>14</sup> Each of these items of data must be time-stamped at intervals consistent with the capabilities of HFTs which use the DCMs systems to transact.

### **Fair Access to Information**

In the Notice of Proposed Rulemaking (the “NPR”), the CFTC states:

in order to promote fair and equitable trading, the DCM must establish and enforce trading rules with adequate specificity to include, among other things, providing to market participants, on a fair, equitable and timely basis, information regarding prices, bids and offers.<sup>15</sup>

The Proposed Rules to which this statement refers neither set forth this concept nor adequately address the issue in another way.<sup>16</sup> This is particularly a concern because unequal access to pre-trade data is an enormously important and timely issue.

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 and it is clearly disruptive. Instead of being passive on this point, the Proposed Rules must prohibit this practice. Technology that enables speed is not the concern. The problem is the sale of privileged access, a limited resource, by the DCM to those market participants who are first in line with the most cash. In the NOPR, the CFTC stated emphatically that ***access to information may not be unequally allocated by DCMs regardless of the profitability of the practice.*** Allowing DCMs to sell privileged access is utterly inconsistent with this statement.<sup>17</sup>

The increased use of DCMs and SEFs 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>18</sup> Electronic trading actually increases certain trading advantages, particularly related to HFT. 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 DCMs to selected market participants that are in a position to use preferential access to

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<sup>14</sup> Proposed Rules, Section 38.552.

<sup>15</sup> Notice of Proposed Rulemaking, Core Principles and Other Requirements for Designated Contract Markets (RIN 3038 AD09), 75 FR at 80597.

<sup>16</sup> Proposed Rules, Sections 38.650 and 38.651.

<sup>17</sup> NOPR at 80597.

<sup>18</sup> Graham Bowley. “The New Speed of Money, Reshaping Markets,” The New York Times, January 1, 2011.

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 which are disruptive of fair and equitable markets.<sup>19</sup> ***This cannot be achieved if access to information flows to and from DCMs are sold to the highest bidder or otherwise granted to a favored few at the expense of all others. Such practices must be prohibited.***

## Conclusion

DCMs are at the front line of rapid automation of trading. It is entirely likely that the increased transparency of the derivatives markets will accelerate this process. DCMs and SEFs must be structured to ensure that this automation will not overtake the requirements of the Dodd-Frank Act for a fair and open marketplace which provides transparent price discovery.

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

Sincerely,



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<sup>19</sup> Dodd-Frank Act, Section 747.