May 13 - Senate Ag Committee hearing on High Frequency and Automated Trading in Futures Markets

Key Topics & Takeaways

- Committee hearing notes the differences between equities and futures markets; namely that futures market does not have same vulnerabilities to front-running through high frequency trading.
- Andrei Kirilenko, former CFTC Chief Economist, says benefits of HFT may be disproportionately shifting to smaller trades and "a few people who are inside the markets."
- Terrance Duffy, CME Chairman and President, agrees that a portion (10-20%) of CFTC enforcement revenues, could help fund the agency.
- Senator Saxby Chambliss (R-Ga.) announces legislation to "fix unintended consequences" of Dodd-Frank for end-users.

Witnesses

- Vince McGonagle

  Director of the Division of Market Oversight, Commodity Futures Trading Commission (CFTC), Washington, DC

- Terrence Duffy

  Executive Chairman and President, CME Group, Chicago, IL

- Andrei Kirilenko

  Professor of the Practice of Finance, MIT Sloan School of Management, Cambridge, MA

Opening Statements

Chair Debbie Stabenow (D-Mich.), in her opening remarks, stated that commodities markets have been about connections between buyers and sellers for centuries but that recently these connections have taken the form of fiber optic cables connecting powerful computers running complex programs.

She noted that some of the concerns raised about equities markets are not applicable to futures markets but said she is still interested in the impact that automated trading has on improving price discovery and if it creates risks. She added that the Commodity Futures Trading Commission (CFTC) needs up-to-date technology and enough staff to regulate these markets.

Ranking Member Thad Cochran (R-Miss.) said that as the Committee continues to consider re-authorization of the CFTC, it will be important to hear suggestions from end-users to help improve the integrity of the processes in place. He also said that more needs to be known about high frequency trading (HFT) in order to determine if the proper framework of regulations and legal provisions are in statute to guard against abuses.

Witness Testimony

Vincent McGonagle, in his testimony, gave an overview of the CFTC's concept release on risk controls for automated trading systems, saying that it is a proactive effort to evaluate technology driven changes in the derivatives market and lists current best practices, existing regulations, and overall concerns.

McGonagle noted that risk controls are broken up into four different categories: 1) pre-trade risk controls, including maximum message rates, execution throttles, and maximum order sizes; 2) post-trade reports, including trade and position information, uniform trade adjustment or cancellation policies, and standardized error trade reporting obligations; 3) system safeguards, including the design, testing and supervision of automated trading systems (ATS), as well as "kill switches;" and 4) options for improving market structure such as publication by exchanges of market quality indicators including order fill ratios, execution speed, price impacts of large trades, and average order duration.

McGonagle explained that a range of opinions has been received in the public comments on the release and that concerns mention disadvantages for firms who adopt recommendations unilaterally and regulations becoming obsolete as technology improves.

Terrence Duffy, in his testimony, stated that HFT has been the focus of negative comments recently "based on misinformation" about futures markets and stressed that "futures markets are not rigged," but rather are more open and accessible than ever before. He explained that electronic trading has increased liquidity and tightened bid-ask spreads, while noting that the increased speed has created a challenge to ensuring the markets operate with integrity.

Duffy said the Chicago Mercantile Exchange (CME) has worked hard to maintain a level playing field and noted that "no one can see an order" prior to it hitting the matching engine. He continued that the CME has an audit trail for all activity as well as risk controls such as pre-execution risk controls, price banding, stop-logic functionality, velocity-logic functionality and message-volume controls that automatically reject irregular orders.

Duffy also addressed the issue of co-location, or a firm having a trading server next to the exchange, saying that the CME provides equal access and that every trader, from "small retail participants to the largest of Wall Street banks," can use it to obtain the benefits of speed.

Andrei Kirilenko, in his testimony, stated that automated markets were developed with the promise of drastically lower execution costs and improved price discovery, and said that these goals have been realized for smaller investors.

Kirilenko said the "flash crash" of May 6, 2010 was not caused by HFT, but that HFT firms helped contribute to the systemic event. He said a CFTC study showed the HFT industry remained dominated by "a small number of fast and aggressive incumbents" that earned high and persistent returns while taking little risk, adding that competitive market forces did not seem to be at work. He continued that these incumbent HFT firms, instead of competing on best-execution, were engaged in a "winner-takes-all" arms race for reductions in latency.

Kirilenko explained that HFT lies at the intersection of regulation, finance, technology and data processing, and offered four recommendations: 1) creating a broad definition of automated brokers and traders, similar to what used to be called floor brokers and traders in the human-based market; 2) that regulators closely examine whether competitive market forces are eroding the high concentration of the HFT industry, adding that if there is not competition then regulators should step in and not rely on industry-suggested solutions; 3) that automated exchanges report latency measurements through the market feed, as latency has become as important as prices and quantities; and 4) that automated futures exchanges continue to broaden the use of short trading pauses and reopening options.

He concluded that this functionality is "not without a cost, but the benefits to public confidence, especially for the slower public, are worth it."

Question and Answer

HFT

Stabenow asked what the dynamic in the marketplace is between speed and the ability of participants to manage risk and discover prices. Kirilenko said HFT firms are focusing on how to outcompete their peers instead of focusing on the needs of customers and intermediates, adding that "what we might be witnessing is potentially socially inefficient investment in technologies that do not really necessarily benefit the end-users."

Stabenow then asked if retail investors would notice if the speed of the market slowed down. Kirilenko said the issue is not with small investors, noting that they receive the benefits of tighter spreads and more liquidity, but rather with pension funds that may be paying a cost when making large trades. He said it is not clear what these costs are but thebenefits of the system may be disproportionately shifting to smaller trades and "a few people who are inside the markets."

Risk Controls

Stabenow asked Duffy if the CFTC should require risk control standards for all market participants. Duffy said this would be difficult and the costs would be extraordinary, which is why the exchange has these controls in place for their participants.

Stabenow then asked if the CME should "broaden the use of short trading pauses," as suggested by Kirilenko. Duffy responded that the CME has controls in place, such as stop-logic functionality, to ensure that events such as a flash crash do not happen in the futures market.

CFTC Regulations and Operations

Cochran asked if there are any changes in the law being recommended by the Commission to address activity that should be disciplined to a greater degree or supervised more closely. Duffy replied that he is not aware of any other law changes that have not already been put out for public comment, but noted that if someone acts nefariously in the market, then they should be punished to the degree that the law provides.

Cochran followed up and asked if the law provides sufficient safeguards currently, to which Duffy replied that it does.

Sen. Saxby Chambliss (R-Ga.) then asked what information could be gathered from a registration regime that is not available to the Commission today. McGonagle said that in evaluating a new regime, registrants would have enhanced reporting responsibilities but the CFTC would want to consider if they are already capturing the types of traders they are interested in. He noted that one proposal in the concept release is to use the floor trader definition for HFTs.

Chambliss then asked Duffy if a new regime would capture more information than the CME is already capturing. Duffy said it would not, as the CME has information on every person, participant, and order and noted that the CFTC has access to all of this data.

Stabenow ask what is next for the CFTC in considering a rule on ATS practices. McGonagle said the CFTC is taking comments on its concept release at the staff level and that staff will review comments to come up with a recommendation. He said a rule could be recommended but that staff is not yet at this stage.

Sen. Robert Casey (D-Penn.) asked if rules that are prescriptive in nature would leave some entities or practices out of the rule's reach. McGonagle said the concern the CFTC has heard is that rules which are prescriptive will be "quickly outstripped" by changes in technology and thus proposals have suggested a principles-based approach. He said the challenge lies in having flexibility versus clarity and that evaluating how rules were applied in the past will help dictate whether they use a principles or prescriptive approach.

CFTC Enforcement

Donnelly then asked if the maximum penalty of $1.4 million is a sufficient deterrent for market manipulation. McGonagle said the CFTC enforces the authority that it has and that he would "have to defer to others about whether more penalties are appropriate for deterrence or there are other mechanisms that are available" adding that "looking at a penalty per violation, increased recently to a million per violation, that's our current mandate."

Stabenow asked if the CFTC has sufficient authority to go after market participants who are knowingly or recklessly disrupting the market. McGonagle said the CFTC's recent increase in authority has led to investigations and associated litigation that "are now starting to come online." He said the Division of Enforcement and the markets take this enforcement authority very seriously and that the CFTC is prepared to work within this jurisdiction. He added however that "further strengthening the manipulation standard would have costs on market participants" and "for clarity, they would have to be evaluated."

CFTC Funding

Stabenow highlighted a statement made by Duffy that markets and the public want more speed. She said she is not sure that this is the case, but rather that the public wants confidence and stability in the markets. She asked if the CFTC is able to keep up with technology in the market and what the agency could do with additional funding. McGonagle said the CFTC could use additional funding to hire more staff to increase surveillance of the markets and to invest in technology improvements to assist in more data collection and review.

Stabenow asked Duffy about user fees on transactions and the idea of using enforcement case fines to pay for agency expenses as a way to address the CFTC funding problem. Duffy noted that the CFTC's fine money goes to the Treasury and that its budget goes through the appropriations process and said this is a way to address conflicts of interest that may be seen if an agency fines participants to fund itself. He did say, however, that there "could be a small portion of enforcement findings" which "would make sense and that 10-20 percent "could probably fund the CFTC in full." He added, "I'm not suggesting it's a good idea or a bad idea, but I think that it should be at least looked at."

Latencies

Sen. Sherrod Brown (D-Ohio) asked if the CME has addressed latencies across all futures contracts and whether they have been shortened or eliminated. Duffy explained that all of the CME's market data "comes out of one pipe and then the way you decide to acquire that is up to you." He added that the CME has dramatically shrunken the latency of market data and market confirmation, saying, "Our issue with market confirmation and market data for the participants is down to a millisecond. In most situations, it actually comes out at the exact same time."

Brown then asked McGonagle and Kirilenko for their thoughts on latency. McGonagle said the CFTC "could certainly consider" latency issues on a contract-by-contract basis and noted that the CFTC is considering this issue of latency in the context of impartial access, where all market participants should have the ability to get access to the markets equally, to ensure that information "is readily available to all market participants without disadvantage." Kirilenko said concerns about latency are "fully justified" and that the public deserves more transparency. He said that latency should be reported in some form so that it can be measured.

Sen. Joe Donnelly (D-Ind.) asked if there are latencies in the market that continue on a constant basis. Kirilenko said studies show that latency is not a number, but rather a distribution of numbers. He said a significant degree of randomness in how latency accumulates results from the time it takes for risk safeguards to process a trade.

Donnelly asked if the CME "keeps an eye out" for latencies. Duffy replied yes, and said they are down to milliseconds "in certain issues" but noted that "there is also a speed-of-light issue that there is not much anybody can control."

Donnelly also asked if latency issues are made public. Duffy said that the CME does not put out press releases when they make the markets more efficient.

When Donnelly asked if latency creates opportunities for HFT firms to get a market advantage, Duffy said, "No, I don't believe it does," because participants have to be "right in the market" and do not have other exchanges to go to in order to arbitrage a price.

End-User Concerns

Chambliss stressed that there is a major difference between a farmer who makes a trade and an integrated company trading millions of dollars in contracts. He said that Congress "thought we had made the right kind of changes in Dodd-Frank, but quite frankly we didn't" and announced that he introduced a bill that "seeks to correct the end-user exemption."

Casey noted that there needs to be a balance between addressing the risk of market activities and ensuring that there is not over-regulation that harms end-users and bona-fide hedgers.

Equities vs. Futures Market

Chambliss then asked what the differences are between the equities and futures markets. Duffy noted that the CME is a "vertical silo" and people do not have the ability to beat customers to different venues on their trades.

Chambliss continued and asked, were a front running to happen and the CME could not pick it up "on the front end," if it be able to find this activity on the back end. Duffy said the CME would pick it up through patterns and surveillance systems.

Donnelly asked Kirilenko what the biggest danger in the markets currently is. Kirilenko replied that the large inter-linkages and complexities between market participants are a risk as trades in one part of the world can be transmitted very quickly across the globe.

Donnelly asked what front-running opportunities exist in the equities markets and how they can be addressed. Kirilenko said that he has not studied the equities markets closely but that it is important for regulators to establish a consolidated audit trail. He added that it is an "empirical mater" whether or not there are front-running opportunities in equities markets. Duffy said that the fragmented nature of the equities market where half of the value is "dark in nature" along with the requirements of Regulation NMS (National Market System) creates the opportunity for front running. He said that the system needs to be streamlined and made more efficient; adding that market structure is the issue, not HFT.