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COMMODITY FUTURES TRADING COMMISSION

SECURITIES AND EXCHANGE COMMISSION

FIFTH MEETING OF THE CFTC-SEC JOINT ADVISORY COMMITTEE ON EMERGING REGULATORY ISSUES

Washington, D.C.

Friday, February 18, 2011

PARTICIPANTS:

CFTC Commission Members:

GARY GENSLER, Chairman

JILL SOMMERS, Commissioner

MICHAEL V. DUNN, Commissioner

SCOTT D. O'MALIA, Commissioner

SEC Commission Members:

MARY SCHAPIRO, Chairman

ELISSE B. WALTER, Commissioner

Presenters:

RICK KETCHUM
Financial Advisory Regulatory Authority

JACK BRENNAN
The Vanguard Group Inc.

Advisory Committee Members:

BROOKSLEY BORN

ROBERT COOK

ROBERT ENGLE

ANDREI KIRILENKO

MAUREEN O'HARA

SUSAN PHILLIPS

DAVID RUDGER

JOSEPH STIGLITZ

P R O C E E D I N G S

(9:30 a.m.)

CHAIRMAN GENSLER: Welcome. I'm going to see if we can call this meeting to order. I'm acting as Co-Chair here to call this Fifth Meeting of the Joint CFTC-SEC Advisory Committee on Emerging Regulatory Issues to order. The date is February 18, 2011, and this meeting is held in accordance with the Government's Sunshine Act. We are joined by distinguished members of the Advisory Committee, Brooksley Born, Susan Phillips, Rick Ketchum, Jack Brennan, Maureen O'Hara, David Rudger and Robert Engle and we thank you for your service.

As we have done in prior meetings of this Committee, Co-Chair Schapiro and I will share the presiding officer duties. First I would like to offer Chairman Schapiro the opportunity to make some opening remarks. Chairman Schapiro?

CHAIRMAN SCHAPIRO: Thank you very much, Gary. Good morning everyone. I'll be very brief. I want to remind everyone because we all are very focused on what a vital role our markets play in capital formation and the lives of millions of Americas, for that reason at the SEC as you all know we began a comprehensive review of market structure in 2009 and of course that's also why both of our agencies have spent so much time considering the events of May 6, trying to analyze, understand and respond to them as effectively as we can. That was of course the day in which the markets temporarily though demonstrably failed to perform in the way which we reasonably expect them to. It's in that spirit that the members of the Advisory Committee were asked to provide us with their own perspectives on the events of that day. I'm especially interested in hearing their views on the effectiveness of the various measures we've put in place since May 6 and on any additional targeted measures they believe we should explore further that could directly address the risk of reoccurrence. Their observations will doubtless provide us with important insights and ideas and I'm counting on them to spur additional comment and analysis from investors and market participants, and I want to thank you all again for your efforts and I'll turn it back to Gary.

CHAIRMAN GENSLER: Thank you so much. I'm pleased to be joined by Chairman Schapiro in welcoming you all here. This is the third time this week that Chairman Schapiro and I have had the ability to share a table. It was an honor to testify in front of Congress twice this week together, but we're also focused on strengthening our markets beyond what we're doing in the Dodd-Frank Act in that we're focused on the events of May 6 and strengthening our markets. I'd also like to thank Chairman Schapiro, her fellow Commissioners, the staff of the SEC and all that they have done not only on May 6 but the incredibly collaborative working relationship on the Dodd-Frank Act. And I'd like to thank the staff of the CFTC for all of their hard work planning this meeting and all of the follows-ups on May 6, and also thank my fellow Commissioners and recognize Commissioners Mike Dunn, Jill Sommers and Scott O'Malia who are here, and I believe that Commissioner Chilton is tied in. Is that right?

COMMISSIONER CHILTON: Yes, I'm here, Mister Chairman.

CHAIRMAN GENSLER: Today's meeting is intended to give the Joint Advisory Committee an opportunity to share their recommendations with the CFTC and SEC and they have had several months to review and consider the staff reports and well as four open meetings and hearing from witness and they have met in subcommittees as well. The Committee is comprised of extremely experienced experts who have been introduced and I look forward to hearing their recommendations.

At both the CFTC and SEC, one thing that we are quite sure of is that the means of communication and technology will continue to advance and affect our markets. This was true in the 19th century when telegraph led to the introduction of the tickertape. It was also true in the early 20th century when telephones were first used to have a central quote system where market participants actually got an instantaneous bid offer spread over the telephone. The year was 1929 I'm told. It was further true during the last decade when markets that we oversee here at the CFTC went from open outcry to now approximately 90 percent electronically traded. So where market makers used to be on the floor of the exchanges, they now often sit at computer miles away or even on another continent. And while market participants used to be involved in each of their trades, they now often rely on algorithms to execute those very trades. Humans are much frequently relying on the judgment that they've programmed into a computer to execute their trading strategies and the markets have evolved to where we increasingly find more Watsons competing with the Ken Jennings and Brad Rutters. Regulators cannot assume however that algorithms in the markets are going to be as well tested or well supervised as we think and see where Watson apparently was in winning Jeopardy! Our regulations have to adapt to the markets increasingly as we move from man to machine.

The events of May 6 were start reminders of the need for regulators to evolve as rapidly as the markets and only through adaptive regulation can hedgers and investors have confidence in the markets and can there be market integrity. We must be sure that we as an agency make the necessary investments in technology as it continues to advance. We too as an agency can't just rely on men and women, we have to rely on machines. We must ensure that our regulations advance as well.

The CFTC will consider the Joint Advisory Committee's recommendations as we look for ways to strengthen the derivatives markets and I thank them for their thoughtful advice. It comes also at a particularly important time as we look at Dodd-Frank rule-writing and the swaps marketplace. So we're going to share your recommendations with our 31 teams and we'll post them on our comment files and on our public website and hear from the public hopefully as well on this. I am particularly interested in a number of topic areas that I know you are going to discuss today about cross-market circuit breakers, pretrade risk safeguards, effective testing of risk- management controls and supervisory requirements regarding these algorithmic trading systems.

Again I want to thank Chairman Schapiro, the SEC and my fellow Commissioners. I think we're going to be recognizing fellow Commissioners for any thoughts or opening statements. Commissioner Dunn?

COMMISSIONER DUNN: Thank you, Mister Chairman. I just want to thank the distinguished Advisory Group for their diligent work on this and it was a little awkward dividing them up into two different groups and they had to work through an intermediary to talk to each other to get around the Open Meeting Rule, but they did an excellent job. This report is extremely timely for us as we go about the implementation of Dodd-Frank, but also as we look at the mergers that are taking place in this industry. So let me echo my thanks to all of you and let me get on the theme that the Chairman started with Jeopardy! for all of us Jeopardy! junkies. When Watson missed something, Watson really missed it and I'm reminded of when he thought Toronto was a U.S. city and that tells us how far skewed that computers cam be. Again I thank you very much for these recommendations.

COMMISSIONER SOMMERS: Good morning. I don't have an opening statement but want to also echo my thanks to all of you for your dedication and the time that you have spent on these very difficult issues and really appreciate the report that you've provided us with. Thank you.

COMMISSIONER O'MALIA: I'd like to also extend my thanks very much for the hard work you've put into this report. This morning I forwarded the report on to our Technology Advisory Committee Subcommittee on Pretrade Risk Functionality so they could review it and that would be contributing to our efforts on that subcommittee and the Technology Advisory Committee. We have a meeting on March 1 and this will contribute to that discussion, so I greatly appreciate your efforts in that.

CHAIRMAN SCHAPIRO: Thank you. I think we may also be joined on the phone by SEC Commissioner Elisse Walter. Today the Joint Advisory Committee is delivering a summary of recommendations concerning the market events of May 6. This is the product of considerable thought and effect by the committee and we are genuinely grateful for your efforts. But in particular I want to acknowledge and thank Jack Brennan and Rick Ketchum who have chaired the subcommittees, taken on a great deal of the organizational responsibilities that were needed to produce the report and we are enormously indebted to you for all your efforts. And for those of you who are watching webcast, the report itself can be downloaded from either the SEC or the CFTC's website.

CHAIRMAN GENSLER: I will now turn the floor over to Jack and Rick and the entire committee who will present the report and recommendations. Following that, the Commissioners and staff of the CFTC and SEC will have an opportunity to ask questions. I'd like to turn over the floor to Jack Brennan and Rick Ketchum.

MR. KETCHUM: Thank you, Chairman Gensler, Chairman Schapiro and Commissioners. First, I think I speak for the entire Commission for again thanking you for the honor and trust including us in its Advisory Committee and the strong efforts of your staff to provide us support. It has been I think a good start and work that the committee has taken very seriously, but it fundamentally begins with the commitment and the quality of the two agencies and we are very honored to be able to provide you and support that we can.

I will speak very briefly in an overview and then Jack I think will work through the recommendations with the insight of each of the Commissioners. Again, one last thank you. I want to emphasize that I've been on many committees over the years. This one has been within the restrictions of FACA remarkably collegial. It has been awkward to have two subcommittees but we're so close at this point we're talking about reunions. It's been a good thing. I do say that it has been remarkable the commitment and contribution of each committee member. So I do believe you can view this as truly a collegial product.

From an overview standpoint I would note that certainly speak for my committee that our thinking and approach began from three basic precepts. The first of those precepts was recognizing the conscious effort of both agencies to encourage competition and ensure low barriers to access to entry and with that to provide a competitive and efficient marketplace for the benefit of investors. Those conscious efforts of the two agencies has led to a market environment that is quite vibrant, that is extremely liquid and that provides low cost relatively speaking for investors, all-important attributes. It does however with respect to the first of our three tenets result when combined with the dramatic changes in technology and electronic trading in a marketplace that under pressure and in times where there is the potential for extreme volatility exhibits some level of fragility. We think that expresses to some degree simply the reality of a highly electronic, low barrier to entry, somewhat highly fragmented marketplace and that with that, that simply cannot be ignored and needs to be addressed just as we note specifically in the recommendations how pleased we are of the steps that the Commissions have already taken in recognizing that reality.

The second precept is that from early on in my government career after the crash of 1986, there was a recognition of the importance of coordination across the derivative and equity markets given both the importance of those markets and the fundamental interlinked nature of them. From our committee's perspective, that has been if anything given the nature of electronic trading become more critical and we speak to that in the report and think again that the demonstrably closer coordination that I can recall in my 30 years of interacting with the two agencies is remarkable credit to both agencies, to both Chairmen and extremely important to really push further.

The third precept is that in a world that has by nature some level of fragility and in a world that is extraordinarily fast, we believe the third piece is to look very closely at questions of how to ensure levels of price and transparent liquidity that is at least able to interact in times of pressure and at times of stress with efforts to try to avoid disincentives from the standpoint of transparent liquidity and where possible the ability to provide incentives for it.

That leads to breaking with the report

in essentially four related portions of recommendations, the focusing on direct measures to respond and address to the existing environment in high-volatile times that result in recommendations that involve a carrying on of efforts that the Commissions have put in place already. The second area looks to efforts from an oversight and supervision standpoint to address very clearly the questions of access and direct access into the market by a wide range of participants and the manner in which those participants in an electronic environment should be provided that access and the accountability and responsibility of both of those participants and those who are active sponsors of their orders must have.

The third piece to repeat what I said focuses again on efforts and possible areas for the Commission to focus on to encourage and to remove and disincentives to transparent liquidity. The fourth area focuses on information provisions, recognizing the crucial importance both from a supervision standpoint and from the standpoint to avoid unnecessary uncertainty in providing rich information on a timely basis both to the marketplace as a whole and investors who operate in that marketplace and to the Commissions themselves from the standpoint of their oversight responsibilities and those other entities from an independent regulation standpoint that will also stand with responsibility for regulatory oversight.

That in essence is where our report focuses. I would like to end with just one important note and I'll speak personally for myself but I believe is shared by all the committee members. We are honored to be a member of this Advisory Committee. We feel quite strongly with respect to the importance of the areas identified and feel that the recommendations that we have made are important and deserve serious consideration. But we also recognize very much the professionalism and perspective of the agencies themselves. We view ourselves precisely as what our name is. We have provided you our best efforts in advice. We have great confidence in the capability of the Commissions to take this input along with the other many inputs you receive as well as your own professionalism in making sound decisions in these areas. Thank you.

MR. BRENNAN: Thank you, Rick. That introduction sets up the way we would like to proceed this morning. What we would like to do is present those four subcomponents to our report in sequential order, have a conversation among ourselves and with the Commissions if this is all right with you Chairman Gensler and Chairman Schapiro because they are very much interrelated. None of the recommendations stands on its own with respect to volatility or with respect to liquidity and so on. So I will share with you the recommendations so that you hear them. I will not read you the whole report I know much as Mary would like that, but that will have to wait for another day. And then we will deepen the information about those recommendations through conversation. Each of the Joint Advisory Committee members has opinions. There are things in these topics that didn't make the report as well because we tried to focus our attention where we had a consensus so our colleagues will feel free to offer other thoughts that might be there for additional investigation by the Commissions and our hope is to make this a fulsome conversation about each topic.

With that background, let me start out with the broad subject of fragility and volatility. Chairman Schapiro, in response to your questions, we have one comment/commendation and then we have four recommendations. The comment/commendation really is the strong concurrence of the committee with respect of the SEC working with the exchanges and FINRA have already taken to first create single-stop pauses and circuit breakers for Russell 1000 stocks and actively traded EFTs, to enact rules that provide greater certainty as to where and when trades will be broken when there are aberrant events in the markets, and then the third step is to implement minimum quoting requirements to eliminate stub quotes. We believe as a group that those are vitally important to the restoration of confidence in the markets and we offer our strong concurrence. As I said, my editorial would be commendation for the quick action in the way those have served the markets and investors very, very well.

With respect to other recommendations in the broad category of market fragility and volatility we have four. The first is that we recommend that the Commissions require that the exchanges and FINRA pause rules should be expanded to all but the most inactively traded equities, EFTs, options and single-stock futures. That probably won't surprise you given our belief that they are a very positive force in the market today. The second recommendation in this category we have is that we recommend that the SEC work with the exchanges and FINRA to implement a limit-up/limit-down process to supplement the existing pause procedures and that Commissions clarify whether Securities Option Exchanges and Single Stock Futures Exchanges should continue to trade during those limit-up/limit-down periods. I think I can speak for most of us that the early-on discussions about what happens in the futures market vis-à-vis what happens in the stock market that it was quite important to us to get a sense that if we can do this, this can help very much with volatility and the confidence in the markets. Chairman Gensler?

CHAIRMAN GENSLER: Maybe I'll hold my question.

MR. BRENNAN: I'm going to do four. So that's the second. The third is we recommend that the CFTC and the relevant futures exchanges evaluate whether a second tier of futures limits with longer timeframes should be instituted when the 5-second limit does not attract contra- side liquidity. Again some lessons of May 6. Finally, with regard to the broad market circuit breakers, we recommend that the Commissions evaluate that system of system-wide circuit breakers and consider three things. First, reducing at least the initial trading halt to a period of time that is as short as 10 minutes from the existing rules today; allowing the halt to be triggered as late as 3:30; and finally, we recommend looking importantly at a more representative index, that being as the S&P 500 as the triggering mechanism which has relevance both on the stock and the in the futures markets.

Those four recommendations we believe will help address the issues of market fragility and volatility, and as I said, importantly we believe the quick steps taken after May 6 were very effective and those would be complementary and additive to those steps that were taken. We would stop there and I would ask the committee members, or Chairman Gensler we'll let you in right now.

CHAIRMAN GENSLER: I'll wait my turn.

MR. BRENNAN: Additional commentary, Maureen?

MS. O'HARA: I think one of the things that underlies a lot of our thinking in this area has to do with the role of uncertainty in high-speed markets. A typical approach to think about is risk and return in markets, but when markets as quickly as they do not, you also have to explicitly recognize the role that uncertainty plays as distinct from risk. I think one of the things that underscored the behavior of the markets on May 6 was uncertainty, uncertainty from market makers about where the market was going, uncertainty about limit order traders about whether or not the books were empty or not empty and uncertainty about whether orders were going to broken or not and cancelled. So a lot of what I think motivated a lot of our discussion in our committee was the notion that in a high-frequency world, uncertainty plays a role and the challenge of uncertainty is that when people become uncertain the solution to uncertainty is nonparticipation and nonparticipation in turn leads to the challenges that we saw on May 6.

So I think underlying a lot of what we have here is an explicit recognition that part of what market regulation now has to do is limit uncertainty. How do you do that? You limit uncertainty by limiting the amount of movement that a price can have before it can fall off the map like it did on May 6. You limit uncertainty by reassuring investors that trading will be halted before things can really get out of control. And you limit uncertainty through some of the actions that you took in really defining when orders will be broken and when things go forward. So I just want to throw out that as an important aspect and an important perspective to think about what led to a number of these suggestions.

MR. BRENNAN: That is actually a great theme, Maureen, just as an editorial comment. It's a terrific theme.

MS. O'HARA: Thank you, Jack.

MR. RUDGER: I have had some particular interest in the market-wide circuit breaker since in 1987 when I was chairman of the SEC we introduced those circuit breakers and my observation is that things have changed dramatically and I urge that the Commissions not only look at the three recommendations we've made but look at the entire area in great detail to ask what the purpose of these circuit breakers is and how the circuit breakers should be changed in order to recognize the new high-frequency trading environment. It is a different world and there are many suggestions as to what should be done, so I urge a very detailed look at that area.

MR. BRENNAN: Brooksley?

MS. BORN: When I was chair of the CFTC we worked on and amended the s circuit breaker so I'm particularly interested in their need for further work today. I feel that in the Commissions' work on these issues it's extremely important, and we believed this in the late 1990s as well, to ensure careful coordination across securities and derivatives markets to the extent feasible both as to market-wide circuit breakers and other actions and single- stock actions as well. This should include pauses, circuit breakers, periods of limit-up/limit-down.

MR. BRENNAN: Susan?

MS. PHILLIPS: As we were discussing in coming to these various recommendations, it became obviously very clear that there are a lot of different participants coming to these markets that are used to very different regulatory environments. It's not CFTC-SEC registrants participating in these markets, but you've got bankers coming to the table now and they're used to a very different kind of environment. Consequently I think some of Maureen's comments about uncertainty get exacerbated when people don't know what is going on. They're used to their own environments and so they pull back and you get this gridlock that happens. I think one of the amazing things of May 6 is that the recovery did occur as quickly as it did to the integration of the markets is becoming more and more complete, but we've got these clashing regulatory regimes coming together. We tried to think about what worked in some markets and could it be moved to other markets. The limit-up/limit-down recommendation obviously has been a large part of futures markets for many years but has not been a part of securities trading. Quite frankly it works well in a pit-style trading environment or where you have it all going on on one market where you can get the information out fairly quickly about limit-up/limit- down. It's harder to know how it's going to work in fragmented securities markets so that when we say that we want you to take this in the spirit of an advisory capacity, all of these things have to be carefully looked at. I think we believe that limit-up/limit-down would add demonstrably to the certainty and understanding of how far things can move before they get halted and that that will be helpful to the markets but a lot of work is going to have to be done in figuring out how to make it work in a different market environment. There are plenty of questions still left to be answered but in trying to bring these questions together, we're looking to try to find ways to help reduce this uncertainty and to make market participants feel confident that they can continue to trade even if you see a fair amount of volatility.

MR. BRENNAN: Rob?

MR. ENGLE: One of the things we discuss is extending the pauses to a bigger universe and I think a challenge that is implicit in that is how big a universe should it really be? What are the issues when you start talking about putting pauses on infrequently traded stocks? If they don't trade very often, then the primary time when prices move is when there is new information and it's new information that you want to allow the markets to respond to rather than stop them from responding to that. I think one of the issues in implementing or thinking about how to implement this sort of recommendation would be to what extent should these pauses have a different structure or perhaps not be applied all the way to the most infrequently traded stocks or most illiquid traded stocks and derivatives? We don't have a particular suggestion as to how to do that, but I think that's an issue that we're very cognizant of.

MR. BRENNAN: David?

MR. RUDGER: I want to add one observation that's come to me as I've studied this and that is that although there is wide agreement that price discovery takes place in the futures markets, electronic trading has expanded the opportunity for price discovery to other venues. We have the ETFs which are providing an opportunity for price discovery, we have the options market which I think has really not been examined very carefully in terms of this analysis and we have the stock markets themselves with high-frequency trading allowing market price changes in milliseconds. So I think when we look at this whole environment, when you look at this whole environment, it's important for you to look broadly across all these markets and at least it's my impression that some of the computerized traders are active in all the markets and they have preprogrammed their computers to take into account information in all four areas that I've talked about so that you really need to get your heads around the question of how is this computer trading going on? What are the areas that they are looking at when they are creating the algorithms and then ask what kind of stocks would you put in.

MR. BRENNAN: Are there other comments from the committee? Let's turn it, Chairman, to Commissioners for questions for us, please.

CHAIRMAN SCHAPIRO: I'd be happy to go first. Thank you. First of all, this is fascinating. I do love the theme of uncertainty and how much it's driven and while we put in place these different mechanisms, I don't think we were necessarily except maybe with respect to erroneous trades thinking about really tackling uncertainty head on so that I appreciate that theme tying things together.

I have a specific question. You talk about and you recommend that we evaluate the existing market-wide circuit breakers that apply as David just said across securities, equity options and futures markets and that we reevaluate the percentage price declines that would trigger the circuit breakers. You don't recommend a specific level and I couldn't tell whether you thought 10, 20 and 30 were too high or too low. What I'm most interested is any thoughts about how we get the balance right because if the view was that we should lower the thresholds, that's obviously going to cause the circuit breaker to be triggered more often and at the same time, we don't want to really disrupt continuous trading more than necessary. So if you have thoughts, Rick, already volunteering about how to think about that and how we get that balance right and what kind of data would be useful for us to collect as we go forward in that area.

MR. KETCHUM: You correctly and perceptively noted that the committee did not reach a conclusion on that issue and thought it would be really good for you to reach it. I think to me and just speaking for myself there are a couple of things to consider from the standpoint that relate in part to the other recommendations that are here. We are in a new world in which there are single-stock circuit breakers on the equity side that are roughly acknowledged and dealt with with respect to the single- stock options and single-stock futures markets. An important learning to be focused on is to how that addresses some of the fragility concerns that relate to system-wide circuit breakers which should be really about an extraordinary day in which there is no an easy ability to have instantaneous return of liquidity simply by adjusting price would be how I briefly summarize the difference, so I think part of this is learning and the Commissions learning from the standpoint of how single- stock circuit breakers work in evaluating that.

The second piece is we make a

recommendation on the futures side which is based on the recognition of the thoughtful and well-designed approach from the futures markets of stop logic but raise concerns that though it works in most situations, that there is a cascading limit risk to the extent that liquidity doesn't electronically reappear and the question is at what timeframe you need and from our experience with people withdrawing, you need humans to make the decision to return to a market either to buy or sell and provide contra-side liquidity.

One could design in a variety of ways. One could create some more coordination between limits at multiple levels that would make it perfectly sensible to leave the circuit breakers where they are or perhaps even drop them down more although personally I think they're probably about right where they are. If you didn't want to do that on an individual contract basis then there might be some arguments now that we think we're in a position particularly on the equity market to be able to reset more quickly and still effectively whether the system-wide circuit breaker could be reduced. I at least view it as really an integrated set of questions as to how the Commissions work through both the single-stick, single- product circuit breakers and system-wide when there is a serious problem.

CHAIRMAN GENSLER: If it's all right to ask, I take it that the committee's advice is on cross-market circuit breakers to shorten the timeframe to 10 minutes in essence. I'm seeing a lot of shaking heads. That's uniform.

MR. KETCHUM: Right.

CHAIRMAN GENSLER: And that it's silent in the report or there are differences is whether 10-percent was right or whether there was any movement and thus you've sort of been silent and left that ball in the professional camp of the SEC and CFTC.

MR. KETCHUM: I think that the key word is deference and not differences among the committee. This was something we really felt deserved the overview of the Commissions and also the additional steps the Commissions might take.

MR. BRENNAN: But no particular sense I think that we wanted to see the possibility of them triggered more often. I think that's safe to say and hope that some of these other mechanisms would make them trigger less often even though they haven't been triggered very often so that the market disruptions, and I'll tell you from my professional experience, and halts are something that we'd like to avoid at all costs and if you can get at it in a different way and have the same volatility minimization because certainly to retail investors a closed market can perpetuate problems that feed on themselves. Maureen?

MS. O'HARA: I was going to add that I think part of what we spent a lot of time thinking about is the fact that the speed that allows markets now to do things that scare us also allow markets to do things that heal quickly and as we think about these sorts of circuit breakers and pauses we have to recognize that just as liquidity can depart very, very quickly now, it can come back just as fast and markets opening and operating are always better. So in our view or at least in my view, what we want to do is not impede information which when there is bad information prices are going to fall or go up, but that information process will continue after the pause if that's really what's driving it. What we're trying to do is focus on these episodic periods where price changes are due to illiquidity issues that can be solved hopefully by the mechanisms that have led to them, the speed with which high-speed traders can come back in and replenish liquidity and that's a lot faster now than it used to be so that the need for very long pauses I think is really not compelling anymore.

MS. PHILLIPS: As the Commissions look at this and you're used to doing pilot programs and trying things out, but bearing in mind that as you do that the rest of the market is getting used to things and the more confident that they become that the pauses are going to be lifted as quickly as possible, it may actually be a slightly moving target as everybody becomes more educated so that it's not easy to just to pin a particular number at a point in time.

CHAIRMAN GENSLER: I think that with cross- market circuit breaker as Maureen is saying, markets can adjust more quickly so shorten it to the 10 minutes, but you're not saying having them happen more often. You also have in that area to move to the S&P 500 as contrasted and I was curious if you wanted to say more on that.

MR. BRENNAN: Knowing something about the S&P 500 I suppose with having built a business around it, it's a far more representative index and you could consider even broader if you wanted to, but if you think about the contracts that trade on the S&P as opposed to the Dow in terms of volume or anything else and the capitalization weighting as opposed to price weighting and so on on the broad representation of the S&P, it seemed to us to be a better representation of the markets if you will and not coincidentally have some cross-market characteristics that seem to us to make it a better benchmark, Gary.

CHAIRMAN GENSLER: I had one on your recommendation four and Rick was complimentary on something in the futures market, this stop-loss functionality, these 5-second pauses in the futures market. I want to make sure I understand the actual words here. You're saying that if liquidity doesn't come back on the contra-side, maybe it should be longer than 5 seconds. Does that mean if the market is going down and there is not liquidity on the upside?

MR. KETCHUM: Yes. If there is not buy liquidity to respond and to stabilize. As you say, the first thing we want to emphasize is we think the stop logic design is extremely thought out and obviously worked here and is very effective. In fact, it's thought out to even deal with situations in which liquidity does not immediately reappear by effectively respreading out the available possible prices in which liquidity is allowed to come back in and though reoptioned but at least providing another period of time for electronic response. Our concern was not that that it wasn't designed and that it would not be extremely effective in most circumstances. It was that in situations as we discovered from both the Commissions' studies and the testimony and our own observations, in which for a variety of reasons electronic traders withdraw because of uncertainty, that the timeframe involved and the reset at steadily lower prices could create the risk of a cascading limit environment in which there would be a dramatic reduction in price in the futures with obviously all the implications to the equity market that occurred without a period of time for some level of reflection that's beyond 5 seconds or 10 seconds. The suggestion that we know the right way to design that was to look at whether at a point of an exceptional day in which that buy-side liquidity doesn't electronically return, how to encourage an opportunity for that buy-side liquidity to occur before the price moves too far so that there is some more effective option if the first one doesn't work. That's the thinking. It is with the emphasis that it is up to the markets and the Commissions to work through what makes sense from a detailed standpoint, but that's the thinking.

CHAIRMAN GENSLER: I think I got it. It's to ensure against cascading, and back to Maureen's concept, there might be such uncertainty that 5 seconds doesn't solve that uncertainty.

MR. KETCHUM: Correct.

CHAIRMAN GENSLER: I'm turning it back to other people on this section whether there are any questions. Mike?

COMMISSIONER DUNN: Thank you, Mister Chairman. Let me ask you a question first. You said in your opening statement that this report is going to be incorporated into the 31 areas that we're working with. Will that give folks an opportunity to comment not only on this report but also on how it affects a particular rule that we may be looking at?

CHAIRMAN GENSLER: I would hope so. This report is in our comment file and to the extent that people wish to comment on this report or comment on this report's reflection on particular rules, that the public would find their way to our website and make comments both on this report and how it might reflect on any other related matters.

COMMISSIONER DUNN: Mary, is the SEC going to do something similar to that?

CHAIRMAN SCHAPIRO: Absolutely. We'll put it up on the website, we'll seek public comment on the report itself and then it obviously is directly related to a number of market structure initiatives we have underway. I don't know that we'll duplicate input into every single comment file, but we'll certainly cross-reference it and we would hope people would look at this in the context of commenting on other market structure rulemakings.

COMMISSIONER DUNN: I asked that question of the Chairs because I wrote down some key words that I heard from the panel as they were making recommendations and it was uncertainty, change, coordination, new people coming to the table, extending to a bigger universe, and it dawns on me that I think David what you said really came home to me because when I came on as a Commission at the CFTC in 2004, it was open outcry, electronic trading was just starting, globalization was there but it was a very small piece and high-frequency trading and collocation types of things weren't even thought of and we've seen in a very short time all of this happening which leads to this fragmentation that you've outlined here. But it appears to me for us that there is a lot of distrust of the other folks involved. Are other regulators going to be doing something similar to what we may be doing because this isn't just a problem in the United States, this is a global problem? There is distrust and are they going to do one thing at the SEC and another thing at the CFTC? Everybody I think agrees that we've got to address this problem but they all want to do it the way they're familiar with and not the way somebody else is familiar with. How do we get to that common denominator of coming up with addressing this across the board for everyone? Scott, I think you're probably going to get the first challenge on this at your TAC meeting. But I would be interested in the panel's comments as to how do we sell this to everyone?

MR. KETCHUM: It's a very thoughtful question which I don't think permits a simple answer, but I would note just a couple of things. One, it is clear that the two agencies are working more effectively than they have ever before. We recognize in the Dodd-Frank world that you have even greater responsibilities than the over-the-counter derivative side and the rest that will have to be thought through so I think the cooperative relationship that exists today across these agencies gives me great confidence that in the United States the approach will be thoughtful and coordinated.

We have been cognizant and aware though not driven by similar efforts and analysis occurring both in Europe through the E.U. and Canada with regard to questions of electronic trading and questions with respect to addressing volatility. I think you will see that some of our recommendations in latter parts that Jack will cover that are certainly not the same as things that have been raised in this countries but respond to similar concerns and with not dramatically different responses.

For better or worse, while the markets are remarkably global from participants' standpoint, the marketplace outside of over-the-counter derivatives still seems to be fairly country focused so there will remains some ability to address this even with some difficulties. But Commissioner, I think you're absolutely right that the challenge for the United States and the CFTC and the SEC will be to work very closely with regulators across the globe and certainly those in North America and Europe where the potential concerns are even greater. So I think that is a great challenge and a great question.

CHAIRMAN GENSLER: Scott?

COMMISSIONER O'MALIA: I have one question. I'd like to get a sense of how the advisory board defines high- frequency trading.

You don't address it here but we've talked about high-frequency trading and I think Dr. Rudger made a good point that the speed of the markets is going much faster. Is it the general class of electronic trading and algorithmic trading and the speed of the market that is the high-frequency trading or are you specifically addressing a class of traders, the highest speed, in and out of the market, flat at the end of the day kind of group?

MR. BRENNAN: That's a great and nettlesome question and for that reason we punted on attempting to define it and we in the report mention that, and I should have mentioned this when we kicked off that the issues associated with "high-frequency trading" is somewhat in the eye of the beholder we think are very real and it's collocation and it's speed and it's liquidity. So we have those peppered throughout the report rather than attempt to define high-frequency trading and/or make a recommendation to the Commissions to do something about "high-frequency trading." I'll speak for myself, but I think it's the sense that I've picked up that it's here and however you define it, it's here and it's not going away so that you can get at it with policies, you can't get it as a business, nor necessarily would we recommend that but we thought it was more productive for us to try to get at the specific issues than to attempt to get the broad categorization if that's responsive to you. It's a very tough thing to categorize because each of us has his or her own definition I believe.

MS. O'HARA: I would point out that I think one of the things that comes through in this report is that there isn't one group that you can point to and say they caused what happened. There are all kinds of issues in this market that have to do with speed more generally. For example, later in the report we'll talk a little bit about internalizers who for the most part are not high-frequency traders by anyone's definition, but of course they are electronic in that the way markets now work is that orders are rapidly moved between venues. In my own view there are certainly issues that arise with respect to "the high- frequency traders," but I think what is missing what is the bigger point that markets are now very, very fast and it's that whole underlying speed issue that permeates a lot of the issues we're going to be talking about.

COMMISSIONER O'MALIA: That is very helpful. It is my believe that overall the markets are moving much more quickly across many markets as we saw on May 6 and it's not necessarily one actor and so our solution bases are going to have to consider that as well. Thank you.

MR. RUDGER: Just one point. I think it's inherent in what we've said that we are not taking the position that high-frequency trading or electronic trading is bad. That's the environment in which these markets are going to exist and we need to find ways to adjust to it.

CHAIRMAN GENSLER: You're saying even as the tickertape came and the telephone came, this is common and that we need to adjust. I don't know if Commissioners Walter or Chilton have any questions at this stage. I know we have three more stages.

MR. BRENNAN: This is a great transition point.

COMMISSIONER CHILTON: Mister Chairman? I did if that's okay. I didn't want to jump in front of Commissioner Walter, but I do have a question.

CHAIRMAN GENSLER: Great.

COMMISSIONER WALTER: Bart, that's perfectly fine because I don't have a question right now.

COMMISSIONER CHILTON: Quickly, I think it's real clear that we do need some sort of definition because if we're going to start regulating HFTs in any different way, and our statute or our rules and regulations don't contain anything on HFTs or on algos so that seems like job one is to come up -- so I agree with Commissioner O'Malia that this is an area that we need to look at, but I certainly think we need a definition.

But I'm curious if the committee thinks that more needs to be done. I've raised the issue for the last several months of, one, testing whether or not some entity, and I'm not suggesting either of the Commissions, but perhaps the exchanges should test algos or what I call cheetah traders, HFT, and that's not with a Boston accent, but cheetah fast traders whether or not there should be some at least sporadic testing or sort of a Good Housekeeping Seal of Approval. CME for example has a testing environment, we had some problems with it this fall, but they would put a program into that testing environment and see how it would react. I'm curious if the advisory committee thinks that's something that would be good or is something we should explore.

The second part of my question is whether or not when things go array, because when they go array they go array fast with the cheetah traders, whether or not there should be some sort of accountability. We're in the middle of coming up with our antidisruptive trading practice rule and I've asked the question and our proposal asked the question whether or not we should include some sort of accountability for algos or HFTs gone wild. So I'm curious as to whether or not either of these ideas, the testing ideas or the accountability idea, make any sense to the committee.

MR. BRENNAN: If I may, Chairman Gensler, if you don't mind, Commissioner Chilton, we will hold that and we will get at both of those issues explicitly in our third section if that's okay because it's right on point and right on theme. Is that fair?

COMMISSIONER CHILTON: That's fair if that's what people want to do. I'm interested in the answers and whenever I get them I'm pleased to hear them.

CHAIRMAN GENSLER: I think, Commissioner Chilton, he's saying, yes, it happens to be part of his third piece. Is that what you're saying, Jack?

MR. BRENNAN: Yes.

COMMISSIONER CHILTON: Very good. Thank you.

MR. BRENNAN: Let's transition, and the discussion on HFT is relevant because two areas that topic comes up in are things like collocation and access because it leads to speed. And then secondly, with respect to liquidity and obligations or not for providing liquidity behaviors that happen therein.

With respect to the issues of collocation and direct collocation and direct access we have one comment and one recommendation and the fact that there only two doesn't mean these aren't vitally important issues. We think it's being addressed but we also think that you're not going back. In sum I think it's fair to say you're not going to pull the teletape out.

The first comment we would have is that the committee supports the SEC's Naked Access Rulemaking and we urge the SEC to work closely with FINRA and the other exchanges with examination responsibilities to develop effective testing of sponsoring broker dealer, risk-management controls and supervisory procedures.

Again the SEC is there but this is evolutionary and we want to ensure that all of the appropriate oversight and controls are in place.

Our second recommendation in this regard is that we recommend that the CFTC use its rulemaking authorities to impose strict supervisory requirements on designated contract markets and futures commission merchants, that employer-sponsored firms implementing algorithmic order routing strategies and that the CFTC and SEC carefully review the benefits and costs of directly restricting what are known as disruptive trading activities with respect to extremely large orders and strategies.

Commissioner Chilton, I think the first is I hope directly responsive to one of your questions. This whole issue as Chairman Rudger said is evolutionary, but the two areas, naked access and disruptive trading, are the two areas that we would commend to the Commission to focus most of their attention on.

MR. KETCHUM: Maybe I could add one point to Commissioner Chilton's question from the perspective of my day job which is directly responsible to be looking at some of the supervision issues and the accountability firms sponsoring high-frequency traders into the marketplace on an immediate basis. I think as you can see by these recommendations, Commissioner, we think the primary responsibility from the standpoint of understanding, monitoring, testing where appropriate, should lie with the intermediaries that are responding to the market and the primary responsibility for the regulators whether that be self-regulators such as FINRA and NFA or the SEC and CFTC should be in assuring the effectiveness of that supervision. I don't have enough experience to fully evaluate the CFTC's capability from a testing standpoint, but I would tell you with regard to our supervision of that now which will be greatly enhanced from the clarity of SEC rulemaking here, the range of algorithms, the sheer number, diversity and difference, is so exceptional that short of building a very narrow funnel and requiring all things to be preapproved that I think it's very difficult to maintain both competition, creativity and controls without demanding that it primarily be focused on the firms and without collectively the self-regulatory organizations and the Commissions making sure that we have extremely strict supervisory focus from this standpoint and that we continue to learn the best ways to ensure controls from that standpoint. I think our separate recommendation on disruptive trading speaks for itself, but that's our thinking and obviously we would be very interested in how the Commissions evolve as they look at this issue.

MR. BRENNAN: Are there comments from the committee? David?

MR. RUDGER: Yes. These are mine. Put 6 and 7 together. We really punted on whether we would define disruptive practices. We are leaving that to the agencies to define what they are. We didn't say in any detail what they are. And the second piece relates to the access part of it although the comment regarding broker-dealer risk-management controls and supervisory procedures relates to the access requirement. It's my opinion that that is a broader statement than just dealing with the access. That is, the broker-dealers themselves that are engaged in this practice have to have their own supervisory management controls. I hope that you'll look at this in a broader sense than just saying this is a sponsored access problem. It's the matter of having responsibility in the broker- dealer area and I think probably at the SRO area, and Rick as well to try and look at this area.

MR. BRENNAN: Brooksley?

MS. BORN: Let me add that it seems to me that disruptive trading goes beyond access and I certainly think it's very important that there be responsible sponsored access to the market. However, I think that algorithmic trading, high-frequency trading, poses some special problems in terms of orderly trading on the markets particularly the high percentage of order cancellation I think could well be considered a disruptive trading practice that should be looked at very carefully by the Commissions.

CHAIRMAN SCHAPIRO: I know I've talked about the need for some kind of throttles on order execution algorithms and it's a lot easier to say I think than it is to do and that it's a question of who's in the best position to do it and that's likely going to be industry and not regulators. But I wondered if there are unintended consequences from the mere existence of throttles that operate under varying market conditions that we should be thinking about if we go down this path.

MR. BRENNAN: We have some in our next set of recommendations. We get at some market-based recommendations. The recommendations presume there's nothing malevolent going on and disruptive trading has a different connotation, but we have some I think pretty I hope interesting and probably provocative capitalistic solutions in here which will be throttles, could be speed bumps but we hope will get at that. I'd be happy to take other questions. This is a short section. We could use that as the catalyst to move on or take questions, Chairman Gensler, from anyone on these topics.

CHAIRMAN GENSLER: Commissioner O'Malia?

COMMISSIONER O'MALIA: Commissioner Born, you mentioned consequences, pretrade functionality and some of these speed bumps or access requirements is one means of setting up best practices or a standard. Did the advisory committee consider any consequences if there are breached or solutions for punishment?

MS. BORN: The subcommittee on which I

was I don't think considered that issue. I don't know if the other subcommittee did or not.

MR. KETCHUM: We weren't particularly focused on consequences, we think that's probably best approached by the regulatory agencies, but we took notice to the fact that both of the agencies and FINRA and the NFA have the authority to the extent that firms, and I want to completely agree with Brooksley, that this is focused both on firms' proprietary algorithmic trading as well as their sponsorship. If you look at the recommendations, it focuses on both employ or sponsor. We think that the existing disciplinary tools that exist from the standpoint of those firms sponsoring in will allow significant ability to demand and to have consequences from the standpoint of fines or even limitation of business. The separate question as to whether the Commissions look to have those consequences on persons who are not registered and beyond the responsibility of the SROs I think is best left with the Commissions.

CHAIRMAN GENSLER: I apologize. I was going to let you go on but then I noticed on recommendation 7 you mention sponsorship, not sponsorship, about supervision and requirements when you talk about designated contract markets and futures commission merchants. In this new world of swaps I know it's not there, but is the absence of swap execution facilities because you had to pull this together and you hadn't put it in or was there a conscious that there's only and not the other?

MR. KETCHUM: The first is correct. Our focus wasn't primarily on the over-the-counter derivative market and we watched with interest and exhaustion the rules that the two Commissions are required to continually put out from the standpoint of SEFs, swap dealers, exchange markets and the rest. But, no, I personally agree with your logic. We're looking for controls across responsible entities and entities that the two Commissions impose regulatory responsibilities on so we focus it as simply not a focus but not an attempt to suggest that they shouldn't have that.

MR. BRENNAN: The next section is about liquidity and obviously liquidity is the key to the robustness and the integrity of our markets in many, many ways so that we have five recommendations that we would put forth to you dealing with that topic the first of which is that the SEC evaluate the potential benefits which might be gained by changes in make or take your pricing practices through building in incentives for the exchanges to provide for peak load pricing models and we'll expand on that a little bit once we get through this list. It's a creative idea.

The committee's second recommendation is that the SEC evaluate whether incentives or regulations can be developed to encourage persons who engage in market-making strategies to regularly provide buy-and-sell quotations that are reasonably related to the market. Again it's a modern era recommendation given how markets have evolved. The third recommendation in the broad category of liquidity is that the SEC and CFTC explore ways to regulate excess order cancellations and we've touched on that a little bit already, including possibly requiring a uniform fee across all exchange markets that is assessed based on the order cancellations to actual transactions effected by the market participant. Again in our open meetings you heard that cancellations were seen to be a major issue.

The fourth recommendation in this category is that the SEC conduct further analysis regarding the impact of a broker-dealer maintaining privileged execution access as a result of internalization in internalizing its customers' orders or through preferencing arrangements. It's our hope that the SEC review would at a minimum consider whether first it should adopt its rule proposal regarding the internalized and preferenced order flows only be executed at a materially superior, and we make a for instance of 50 mills for most securities to the quoted best bid or offer. A second area to focus on would be requiring firms internalizing customer order flow or executing preferenced orders flow to be subject to market-maker obligations that require them to execute some material portion of their order during volatile markets, staying in the market.

The final recommendation in the broad category of liquidity is that we recommend that the SEC study the costs and benefits for alternative routing requirements. In particular we recommend that the Commission consider adopting a trade-at routing regime. The committee further recommends analysis of the current top of book protection protocol and the costs and benefits of its replacement with greater protection to limit orders placed off the current quote or increased disclosure of relative liquidity in each book. Again in the early stages together, this whole topic of liquidity, where it went, what was real and what was ephemeral was so important that this is a core part of our recommendations. Rob, could I ask you to expand a little bit on that first one? I think it would be very helpful for the

Commissioners and the audience to hear some thoughts about that.

MR. ENGLE: I think the most dramatic thing that we saw on May 6 was the evaporation of liquidity and so liquidity is a natural topic for us to be focused on and to some extent our proposals deal with liquidity in a crisis and also liquidity in general for the markets. In the old days, liquidity flowed into the markets when there was turbulence in the market because the market-makers could profit from the bid-ask spread which would get naturally considerably wider and the spread was more or less a market mechanism for determining who was going to supply liquidity and who was going to demand liquidity and that kept this in balance. I think in the electronic world where things move so fast and the spread never gets much wider, this incentive to supply liquidity when markets become more turbulent is diminished and I think the idea that we have in this proposal is that perhaps we need a better way to encourage liquidity particularly as markets become more turbulent. We've proposed in here one mechanism but there would be probably lots of alternatives that could be used, but the idea is that it should be a time-varying incentive to supply liquidity, that sometimes when it's really important that liquidity be encouraged and that's where the peak load pricing idea comes in like you charge a different price for electricity when air conditioners are all turned on than you do when it's cool outside. The proposal here would be to do it with maker-taker pricing arrangements so that there is an access fee for taking liquidity and a liquidity rebate for supplying liquidity. This is set up by Reg NMS, and in fact rebates are not limited but the access fee is limited and these are typically set by individual exchanges and they are constant over time. So the question is could they really be set in a time-varying way and I think one of the things that would be an easy, simple step might be just to remove the ceiling on access fees at times when the market is short of liquidity, that that would allow exchanges to raise their access fees which would discourage new orders from coming in to take liquidity and hopefully they would at the same time increase the rebate because they tend to offset each other in terms of the P&L of the exchange and to encourage liquidity supply. The hope would be that a time like this would give the market incentive to solve illiquidity issues before we hit either the limit-up/limit-down or the pauses that we've already talked about. Since this would be up to each individual exchange's discretion, of course you have to think about how competition across exchanges would work out. But it seems to me that if one exchange has a higher access fee than another, they're going to get fewer aggressive orders coming so that that would mean that the aggressive orders would all be flowing to an exchange which had a lower access fee and correspondingly this might suggest that they might also want to raise their access fee, and similarly if liquidity is flowing to exchanges where the rebate is higher, then their book would fill up more quickly and so there would be natural reasons why exchanges would compete in both the access fee and the rebate. It I think could be done relatively simply, although the question of whether algorithms would be rewritten and how they would learn that you turned off this fee and exchanges would take the effort to change the fees, I don't know how well that would work.

MR. BRENNAN: Before we go to questions, I thought it might be helpful to have Maureen talk a little bit about our last recommendation as well for further definition.

CHAIRMAN GENSLER: Which number is it?

MS. O'HARA: Number 12. I'd like to pick up on what Rob has started, that the issue that we're focusing on here is that markets provide both price discovery and liquidity. A lot of the ways that we traditionally thought about markets have focused on enhancing the price-discovery, so you can think about things like the consolidated tape and NBBO has other features that help you understand where the price is at any particular point in time. The challenge we now have is that liquidity is also something produced in markets, but in a fragmented world and in a world where liquidity moves not only across equity markets but across to different types of contracts such as futures and options, the nature of liquidity is not homogeneous. So part of the challenge that you face is that liquidity now is not as Rob pointed out being provided by a designated person who sets an amount they'll buy and sell and there's liquidity. Liquidity now is created through a conglomeration of orders being willing to buy or sell on limit order books and the challenge you have is you have to incent people to be willing to post liquidity because if they don't do it, books become empty and we saw what happens when that occurs.

The key to recognizing the challenge here is to recognize that all liquidity is not the same. A lot of the orders that flow into the market particularly retail orders and equities are generally reviewed as benign orders. They're generally not information related, the orders that market-makers generally expect in the old days they'd make money off of and allow them to bear the losses they get from more toxic order flow. The challenge you now have is that in a world with the trade-through rule, you have to match the top of the book, you have to match the best quote or send the order to where it's going. The ability to match the best quote and not send the order does two things. It does allow the person whose order has been sent in who wants to trade to get the best price quote that's in the market, but they're getting potentially for example from the internalizer and not from the person who actually posted that best quote up front. The problem with that is that it doesn't give the right incentives to post a quote, it doesn't give the right incentives for liquidity provision and that's really what we're trying to focus on, how do we go about creating a world in which liquidity provision arises naturally in market?

The current structure of how routing

occurs contributes both to the market that works extremely well and to a market that may not work extremely well because one of the challenges now is that large amounts, some might even argue almost all, retail order flow never makes it to the actual market but instead is caught in various types of internalizing types of processes and that's created a very competitive market which is a very good thing, but it also has created this quote-matching challenge that discourages limit order.

The other problem we currently have is that limit order protection applies to the top of the book but not below and one of the challenges we discovered was orders routed to markets that had the top of the book but very little below and those orders just fell to the bottom. What we are advocating now is to recognize that essentially the highway that orders travel on is a lot more complicated and that we have to continue to think about how in a market that's as fast as this one do you give the right incentives to post liquidity and that is behind our recommendation, the notion of moving to a trade-at from trade-through might be a good rule for the Commissions to consider. We note however that it is a huge recommendation in many, many ways because the markets have been built with the structure that was put in place as you will not only through Reg NMS but previous decisions and we don't indicate that we think this is an easy change. But we do recognize that we have to think more seriously about the nature of incentives to post liquidity and Rob's suggestion about changing access fees is one, and this suggestion about rethinking routing decisions is another.

CHAIRMAN GENSLER: I suspect Chairman Schapiro and Commissioner Walter might have some questions.

MR. BRENNAN: We did disclaim it as provocative just to be clear.

CHAIRMAN SCHAPIRO: It is, but trade-at is something that I've been interested in for a long time so I would be curious that beyond you do acknowledge that there are substantial costs with respect to technology and implementation with going to something like a trade-at rule, but are there other potential downsides from it?

MS. O'HARA: I think part of the challenge that you have is I think the trade-through rule created a very competitive market which has been a great thing. We have large numbers of participants in markets now and as you well know, you are now regulating 13 exchanges and myriad off-exchange venues to trade. Not all nonexchange settings should be affected by this. There are lots of ways the market has evolved to more efficiently handle orders. But certainly part of the way markets work these days with orders shifting back and forth might be affected by trade- at and that might affect the business models of a number of firms in the markets. This is not a trivial change and as we say, one factor that does enter into our thinking is the behavior of the internalizers as portrayed in the wonderful reports that staff pointed out that they produced that a lot of the internalization which normally does take this order flow and clears it before it gets to the rest of the market stop doing that and instead route it at that point so that there have been costs and benefits to the structure that we have and there are undoubtedly large costs and benefits that will apply here. The issues that I think the Commissions will have to struggle with is whether the costs on liquidity provision that we're currently with are sufficiently large to outweigh what will be huge costs for a number of technology issues, for business and for the interactions between different participants in the market.

MR. BRENNAN: Are there other comments from the committee on any of these recommendations?

MS. PHILLIPS: I think that as we were struggling with this we were trying to keep the emphasis on provision of incentives and recognizing that as soon as you define a rule or a category of traders, traders then realign their businesses to get outside of the definition so that you can sort of get into a quagmire or a trap and that was why we were trying to focus on provision of liquidity so that as all kinds of regulations are being considered, thinking in terms of does this create additional incentives for liquidity so that that was trying to keep the point on the incentive.

I think that from an economist's perspective the notion of perfect markets, of all orders being exposed to all other orders, we're not turning back the clock here. We know that's not going to happen. But recognizing that lots of new players are coming to the market and that the high-frequency trading, computerized trading, algorithms, so on, are changing the complexity and the types of people who are coming to the markets that it is worth a relook at some of these basic questions of such things as internalization. We know we're going to have internalization, but the question is to have the right amount of it so that it's not denigrating the pricing mechanism that you hope markets will provide. It is a balancing and that's why it is true that we didn't focus as much on trying to be very precise with the definitions because we know as soon as you do that, somebody is going to try to get outside of that, but keeping the eye on the ball of confidence in the markets, liquidity, and as soon as markets lose credibility they're gone and if you get too much pricing away from the markets are you losing that price-discovery function which is so very important? That's why we kept coming back to the questions of liquidity provision.

MR. BRENNAN: Brooksley?

MS. BORN: Let me mention that to the extent that precipitous withdrawal of liquidity by for example high- frequency traders, through algorithm trading or when disproportionate order cancellation occurs, I think that it is possible to consider that a disruptive trading activity and therefore the Commissions can consider regulation as well as incentives as a tool and that's one of the reasons why for example in recommendation 9 we mention both incentives or regulations.

CHAIRMAN GENSLER: I find myself associating with so many comments but, Susan, I liked how you said confidence in liquidity and the pricing function of markets and that too much is a way and that's a problem. On order cancellations and Commissioner Dunn and were chatting here so maybe I'm taking part of his question, but many of these markets have very high numbers of cancellations per order. In rapidly changing markets some of them are 100 orders for every transaction or more and I wouldn't be surprised if 5 years from now when Watson will seem old and there will be something new. When Mike Dunn started at the Commission, Watson wouldn't have won. Big Blue didn't win. But as for this order cancellation, give us a little bit more thinking I guess it was on recommendation 9 or 10.

MR. KETCHUM: Maybe I can start it and then look to my fellow committee members. I think it's very important to parse the actual words of the recommendation and to remember back to the important statements made by many, but Jack in particular. It was not the committee's intention to make a judgment of the appropriateness of a particular type of trading and that I think is consistent across the entire set of recommendations. Recommendation talks about the Commissions exploring ways to fairly allocate the cost imposed by high levels of order calculations including perhaps a uniform --

CHAIRMAN GENSLER: So that's just allocating costs and not prohibiting?

MR. KETCHUM: If one looks across more concentrated market structures particularly I'll speak to the one I'm most familiar with which is the fragmented equity markets in the United States, if you look across concentrated order structures you will generally see that there are provisions either relating to throttling orders or imposing costs from the standpoint of huge levels of message traffic where the huge levels of message traffic are not terribly related to the number of executions that occur from the message traffic. There can be instances and we're very focused where that can be improper. It is a judgment that those impose very substantial costs from the standpoint of technology, capacity and surveillance. The recommendation is really focusing on recognizing that in a very fragmented world, candidly the exchanges who might otherwise impose a variety of restrictions have no leverage whatsoever in providing it. So the focus I'd aim it on is the precise words of fairly allocating costs.

COMMISSIONER DUNN: If I could follow-up on that, Richard, because you are very precise in what you're saying when you said it deserves further study. I guess we're looking at what areas should we look at to study further. Is the cancellation fee primarily on the bid side or ask side? You say that the CFTC should evaluate whether it is something we ought to adopt as well. Are they allocated X number of cancellations that they can have and should that carry across from venue to venue?

MR. KETCHUM: I think those are very good questions. That's one of the reasons we're pleased to be the advisory committee. Including both agencies is not to say that both markets or the range of markets are in identical circumstances or that the precise response given the different circumstances should be the same. Nor again as I say is it a suggestion that there should be an allocation of message traffic or cancellations. I don't think anything here would suggest that type of rationing. It is to suggest that it's worth exploring the demonstrable impact from a cost standpoint this has and evaluating the best way to address it. I will say that we are in the business of conducting surveillance and we find it is notable that in many instances the range of cancellations in more inactive stocks seem to have no great economic rationality from any trading strategy. As you move to more active stocks the rationality becomes very clear and it really becomes a question of allocation. The right answer is not necessarily the same across different regulatory marketplaces and we are very careful in suggesting it be considered because we don't view this as simple at all. We are all believers in both Commissions' efforts to provide low barriers to entry and encourage competition and we think that the Commissions are the right ones to be able to make these judgments.

COMMISSIONER DUNN: I think you quite accurately point out that a single exchange can't do this because they don't have the broad view of everything. Is this something that falls under FINRA's oversight or is it something that the Commissions ought to have that data or that information available to make some judgments on what's going on?

MR. KETCHUM: I personally think speaking of the equity markets that the only appropriate place for it to begin is with Commission participation because it certainly can't work unless there is a consistency across all liquidity-providing markets that compete against each other on the equity side and I'll put separately the question of futures. I do think that while it might involve FINRA and exchange rulemaking, it certainly should begin with the SEC and I would expect that the answer is the same on the CFTC side.

CHAIRMAN SCHAPIRO: I want to follow-up on that. It strikes me based on a several of you have said that there are a lot of different combinations of fees and rebates that could be combined to different effect in the market and one of the ones that occurs to me is if you have an order cancellation fee whether you would waive that fee or reduce that fee to market participants who undertook to provide liquidity. Is that a way for us to think about some of these things is we very much I guess need to think about how they work together and what the implications or doing one or waiving one or increasing one or lowering one is in combination with all the other potential responses?

MR. BRENNAN: I think that's exactly the right analysis, that there is a theme and part of what would be the end objective as a practitioner would be to see behaviors that you want based on the various incentives and mechanisms in place. It's partly, Chairman Schapiro, why we wanted to bunch these together in presenting them to you under a packaging so that they fit together and not stand alone.

MR. ENGLE: I think one of the things that I think we could worry a little about with a fee on cancellations relates more or less to this point which is the orders that are being cancelled are actually sitting limit orders so that they are already liquidity supply, so by charging for cancellations you're making it somewhat more expensive for liquidity to be supplied and I think this is a counter-incentive to the liquidity supply that we're interested in. My feeling is that it's really the real cost of all the message traffic that we should charge for rather than some distortion in the market that comes from cancellations themselves. I don't know how you measure exactly the real cost, but if it's not high now, it's going to get high soon and sooner or later there needs it seems to me to be a charge for the message cost but I think it might not be a positive effect on liquidity supply unless you do something different for people who are designated market makers or something like that as you suggested.

MR. BRENNAN: David?

MR. RUDGER: I'd like to comment on number 9 where the phrase that is used is "engage in market-making strategies," and then you asked to provide buy and sell quotations that are reasonably related to the market. It might be possible to expand that recommendation to say require some obligation to provide liquidity. It's not in there and I might have wanted to have it in there. The other piece of this is that the phrase "engage in market- making strategies" is not very well defined and I at least was concerned as to whether those who are engaged in collocation are somehow engaged in market-making strategies and whether that's an appropriate activity that might be looked at in terms of imposing additional responsibilities.

MR. KETCHUM: Perhaps one clarification. The committee in using those words used them not in the traditional registered market-maker concept but more in the concept that was used by staff in their studies that you provided us that identified market-making strategy and market-making like activity. I think I fairly state that addressing all that is easy from that standpoint. We definitely did not mean to constrain it to the existing market makers and supplemental market makers who exist in markets today.

CHAIRMAN GENSLER: Jack, do you want to do the fourth area unless Commission Walter or Commissioner Chilton and particularly Commissioner Walter since so much of this is on the SEC side?

COMMISSIONER CHILTON: I do have another question, Mister Chairman, if now is appropriate.

CHAIRMAN GENSLER: Yes.

COMMISSIONER CHILTON: I'd like to ask Chairwoman Born a follow-up. She was talking about disruptive practices and HFTs and that was as you recall one part of my earlier question. I feel like maybe you guys punted a little bit on this question so that I'm curious if there is a little more granular thought that Chairwoman Born has. If there is no law, rule or regulation that differentiates between practices that intentionally go in and that are maybe risky trading strategies but that they roil markets, but were just a risky trading strategy, and then strategies that are designed to roil markets, even to go so far as financial terrorism. If we don't as regulators set up a line between what these things are and have some accountability, what is there to stop people from engaging in them? I'm not suggesting that we mess up something that's positive out there. If this cheetah trading, this FHT trading -- narrow spreads and increases liquidity, that's great. My concern is that these activities by these artificial-intelligence-generated systems disrupt efficient and effective market. So I'm curious, Brooksley, if you had a further thought on that.

MS. BORN: I think you're pointing out some very relevant issues and although I plan to support the report of the advisory committee, I would have been pleased to see a more forceful recommendation that both Commissions investigate and consider the issues raised by high- frequency trading, massive order cancellation and related issues as disruptive trading activities and consider the possibility of regulations that would limit them. Obviously the report that we're submitting doesn't go that far. I would have been pleased if it did.

MR. KETCHUM: If I could add one clarifying thing, Commissioner Chilton, to Chairwoman Born's comments. I don't think you should have any doubt at least speaking from the equity side that intrusions aimed at denial of access or intentionally destabilizing the markets are at a minimum violation of exchange and FINRA rules and I think actually the Commissions would find way for it to be a violation of theirs, but at a minimum they're violations of FINRA and exchange rules. The terrorism suggestion, I don't want there to be confusing anyone on this call that that is illegal today in the equity markets and clearly so, putting aside the question of what we think is value of the Commissions continuing to focus on the broader issues that Chairwoman Born properly described that could be considered.

MR. STIGLITZ: May I make one comment? I very strongly endorse what Chairwoman Born has just said. I too would have liked a stronger statement along those lines.

MS. BORN: Let me point out a sentence that gives me some comfort in my decision to support the report, and that is on page 11 when it's talking about order cancellation. In the text recommendation number 10 it says, "At a minimum we believe that the participants of those strategies, that is order cancellation, should properly absorb the externalized costs of their activity." I do think that both Commissions are free to and should in my view look at whether further action by the Commissions is needed.

CHAIRMAN GENSLER: I want to note that committee member Stiglitz is on. I think that's terrific. I didn't realize that you were so I apologize, Joe, that I didn't earlier introduce you as well. I do sense that on this issue of when do order flows and messaging get so large that they by their very nature and not just a cost but are disruptive is one that this committee maybe hasn't come together on yet, but it would be helpful to understand. When is it so much that it's again not just a cost, but it may well be either intentionally or some other way disruptive? I think that's what we're hearing.

MR. KETCHUM: And we're committed to continue that discussion in the ongoing weeks.

MR. RUDGER: I'd like to say that I agree with Chairman Born on this issue. I had thought that her concepts were caught with our recommendation that the Commissions look at what is disruptive trading and that those as she described them would be logically one of the areas of inquiry.

MR. BRENNAN: I think that's right, David. In response to your question, Gary, without making them defined terms we were hoping that we could as Rick said as we continue our work get to just the question you were asking and we hope that that board bucket of disruptive trading would address some of this.

I know we're pressed for time so I want to bring us home in the last lap of the Daytona 500 with a broad topic, and obviously the last bucket of topics for us was information and markets and regulatory responsibilities are nothing but information in many ways. We had two here that we thought were most important to recognize and in some ways to endorse some work that's gone on. The first is that we recommend that the Commissions, and you can see why given what we've been discussing today, consider reporting requirements for measures of liquidity and market imbalance for large market venues. One of the underlying themes here is what is real liquidity and what is notional liquidity so that we would encourage each of you to look and see if there are ways that you can help market participants know better what the market dynamic looks like.

Our last recommendation follows on SEC's work and we recommend that the SEC proceed with two caveats, one, with a sense of urgency. We think that it's required to move quickly. And a focus on cost-benefit to implement a consolidated audit trail for U.S. equity markets. We know that that's an area of great interest to Chairman Schapiro. The sense of urgency and cost-benefit are linked. We believe that it's beneficial for us to move ahead with whether we need real time or we think getting into that game, if you will, quickly is important. We think May 6 was a great example and the follow-on from May 6 was a great example of how beneficial that consolidated audit trail could be and in some ways not to let perfection be the goal since we're not sure what that is. My assistant asked that the CFTC should similarly enhance its existing data collection regarding orders and executions. Chairman Gensler, I didn't mean to short-change you on that recommendation. It's the last recommendation but hopefully each of the Commissions understand why we believe that data enhancement is so important to you but also to the markets generally. That concludes our recommendations and we'd obviously take questions.

CHAIRMAN GENSLER: We have questions from Commissioner O'Malia and also at some point, I don't know if there may be staff questions.

COMMISSIONER O'MALIA: Thank you. Two questions. Fourteen does capture a challenge ahead of us and if you could elaborate on any thoughts you have. In putting this study together and looking at the events of May 6, what were the data issues that most confounded your work and presented challenges to you at least in our markets and in the futures markets? Second, would it help in defining the original question I asked, that is, if we had mandatory markers on specific traders by activity?

MR. KETCHUM: I think it's an excellent question, Commissioner O'Malia. I'll speak again from my experience in surveilling the equity market, but that's certainly an excellent question for the futures market as well. I believe both markets are limited by the limited granularity and details of the audit trail information that it has immediate access to. The SEC has a separate problem from the standpoint of needing to be as the Commission properly notes in its consolidated audit trail to be directly linked into that information which is pretty much manipulated by the exchanges and FINRA today.

CHAIRMAN SCHAPIRO: Manipulated in a good way, not manipulation-manipulation.

MR. KETCHUM: Cared for. Thank you. But there is a clear lack of granularity given the fact that electronic traders today are very involved in pricing the marketplace and the systems have been not completely with respect to large traders and a variety of things, but have been primarily focused on the persons who are registered who have traditionally been the pricing mechanism for the marketplaces. I think you're right and I think not only as obviously terribly critical in the equity to ensure to have that information be consolidated across fragmented markets, but also that it easily allows the Commissions and the self-regulators to confidently look at the persons who are impacting the market and to do that in a short period of time and not have the difficulty of pulling that information together over considerably longer periods of time. I think it's not just consolidated, it's also granularity and your question is very correct.

MR. BRENNAN: Are there other opinions? David?

MR. RUDGER: I would like to urge both Commissions to coordinate their audit trail responsibilities because we're talking a market here in which traders are trading both the futures market and the stock markets, equity markets, and it would be important to have I think some identified marker so you could trace the activities of any particular individual trader in both markets.

CHAIRMAN GENSLER: So that I understand, Commissioner O'Malia when you were using the word marker were you using it as David was, a sort of unique identifier by trader? Is that what you were asking?

COMMISSIONER O'MALIA: I actually asked that question and I'm interested in general what would it be, but by behavior.

CHAIRMAN GENSLER: Consistent maybe with what Commissioner Chilton was saying too.

COMMISSIONER O'MALIA: Do we need to by their trading style or behavior?

CHAIRMAN GENSLER: So that's the question. Do you think we should have any I.D.'s by style or behavior? I see shrugs. I think I'm getting a no.

MR. KETCHUM: From a cost-benefit standpoint I think that there may be great value in focusing on the most active participants in the market. I don't know whether I would describe them precisely by behavior, but I.D.'s for every participant in the market creates a great deal of complexity that don't necessarily provide as much as regulatory benefit as it could. From that standpoint and focusing particularly on not just persons with large positions but persons who are extremely active in the market, I think that's a good distinguishing factor. I don't know whether I'd go further than that.

CHAIRMAN GENSLER: Again back to the phone from your side, Joe Stiglitz or Commissioner Chilton or Commissioner Walters?

MR. STIGLITZ: I feel comfortable. The only one other thing I might want to add and you'll get the spirit is as I always do is the link between some of the concepts that keep getting raised like price discovery and the real economy. Price discovery in a microsecond or a nanosecond may have no real relevance or very limited relevance to the economy and therefore some of the other issues that have been raised about the cost have to be balanced with the questionable issues about the benefits.

CHAIRMAN GENSLER: I don't know that there are, but are there any questions from Robert Cook from the SEC team or Andrei and Steve from the CFTC team? Robert? You might want to get up to a mike so that the public can hear you. Robert, they're handing you a mike.

MR. BRENNAN: His question was to amplify on recommendation 13 and what kind of information and what uses of that information we would suggest you make.

MS. O'HARA: We had discussions about these issues in the sense that part of the challenge you now see is that the information environment that surrounds a highly fragmented world in which liquidity is scattered across many markets creates real difficulties for the market to figure things out let alone for the regulators to figure things out so that recommendation 13 is really trying to think about what is the information need in a world that's so fast and so fragmented? Part of the challenge that see is that professional traders now really don't rely on the consolidated tape because it doesn't meet their needs. They buy information from the various trading venues to help them for example construct measures of the book so that they have a better idea of where liquidity exists in these markets.

I think that raises a broader question about whether or not the market more generally, not just people who buy it from proprietary trading feeds, need greater information on markets and the issues that we're trying to address here go back again to the fact that our information provision in the past has been more related to the notion of price discovery and less perhaps to liquidity that underlies that price discovery. Issues here for example could be measures of the amount of depth that exists in any particular market setting. I think one of the things that is particularly fascinating about the report that the staffs provided was the insight that the book on the CME's e-mini was becoming empty for hours before the actual crash and that's a fascinating statistic. Had the market had an idea of how imbalanced the orders were, it might have led to more willingness to run in and provide orders on the empty side. Part of what we're recommending here and I admit it's rather vague but it is focusing on this idea that liquidity now is not a given. It's going to come about through the accumulation of orders on books and through the incentives to get people to send orders to these markets. They won't know to send if they don't really know what the nature of the liquidity is.

There is a downside that we talked about and that is you don't want to scare people. You don't want to say them, by the way, over here there is really nothing but sell orders because then that again can lead to concerns about whether or not there are "problems" in the market. But I think one of the things that we've spent a lot of time on and which I think the committee does have a general view on is that liquidity is now something that is going to come about through the coordination of markets and people in them and coordination has to rely on information.

MR. KIRILENKO: I'd like to chime along similar lines in that very section. To me that section was also information but also transparency, increasing transparency to the markets, and from that perspective did the Joint Advisory Committee have some thoughts on how market regulators could become more transparent from a data standpoint? Is there some data that you think that as we bring it in and we work with it we should be releasing more to the markets on that? Since markets are so fast now then maybe we should be releasing data faster. What kind of data would markets need to have to be more efficient?

MR. KETCHUM: I think those are very provocative and intriguing questions. I can't say that they were specifically what the committee focused on so that we can certainly focus on it going forward. And your initial statement that we were very interested in enhancing the transparency to ensure greater understanding and less uncertainly is absolutely correct so that we would be pleased to talk more with staffs about that going forward.

MR. BRENNAN: Rick and I thank our subcommittee members. Again this is a hard process to get eight people to work together without working together. Secondly, we want to thank the staffs. The work by your staffs as has been mentioned on their reports has been outstanding and their support in this process has been outstanding and we're very grateful for that so that before we get to voting or anything else, I wanted to make sure that our gratitude was on the record.

CHAIRMAN SCHAPIRO: Thank you very much. Let me also before we vote say how grateful again we are to your efforts and that we could get such talented people with incredibly busy lives to give up the time to help us and give us your best thinking is really a gift and we very much appreciate it.

I'm going to go ahead and call for the vote. Let me note that because Chairman Gensler and I are the administrative co-chairs of the committee, we did not participate in the drafting or the meetings or the discussions so that we will not vote on the report, it would seem a little awkward in any event since you're voting to provide it to us. With that caveat, all those committee members in favor of submitting the report to the Commission please say aye.

(Chorus of ayes.)

CHAIRMAN SCHAPIRO: With no opposed I think. The ayes have it unanimously and the report is now accepted. If there aren't any other questions, I guess I will turn it back to Gary to conclude.

CHAIRMAN GENSLER: I'd like to close by thanking Commissioners from the CFTC and SEC for participating and their thoughtfulness. It's now to be taken up I guess by 10 Commissioners and you had two subcommittees and we have two Commissions.

I really again want to thank all eight of the committee members. Your schedules are enormous, your expertise, I can tell by the fidelity and the detail of the conversation even today that we'll continue to benefit. You're not going anywhere. This is a committee that I think has been enormously beneficial for the two Commissions to continue to get your advice and counsel.

As a reminder again to the public, the document itself has been posted to our individual websites at the CFTC and the SEC. We do invite interested persons to review these materials and post their own comments and observations on the committee's work and particularly as we're in a very active period of looking at Dodd-Frank to post comments to the extent that they relate to Dodd-Frank. Many of the comments related broader to market structure, but where they do relate that would be very helpful. I want to thank you and I want to thank staff as well for all that you've done. I think if there is no other committee business, hearing none I'll entertain a motion to adjourn. There were no minutes that I had to consider? Then I will entertain a motion to adjourn the meeting.

SPEAKER: So moved.

SPEAKER: Second.

CHAIRMAN GENSLER: All in favor?

(Chorus of ayes.)

CHAIRMAN GENSLER: Not hearing any opposition, Joe, you're not opposing. No. The meeting is adjourned. Thank you.

(Whereupon, at 11:39 a.m. the PROCEEDINGS were adjourned.)

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CERTIFICATE OF NOTARY PUBLIC

DISTRICT OF COLUMBIA

I, Irene Gray, notary public in and for the District of Columbia, do hereby certify that the forgoing PROCEEDING was duly recorded and thereafter reduced to print under my direction; that the witnesses were sworn to tell the truth under penalty of perjury; that said transcript is a true record of the testimony given by witnesses; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this proceeding was called; and, furthermore, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Notary Public, in and for the District of Columbia

My Commission Expires: April 14, 2011