UNITED STATES OF AMERICA

COMMODITY FUTURES TRADING COMMISSION

MARKET RISK ADVISORY COMMITTEE MEETING

Washington, D.C.

Tuesday, April 26, 2016

PARTICIPANTS:

Opening Statements:

CHAIRMAN TIMOTHY G. MASSAD

COMMISSIONER SHARON Y. BOWEN

COMMISSIONER J. CHRISTOPHER GIANCARLO

Panel I: How Well Are Our Derivatives Markets Functioning From Market Participants, Particularly End Users?

JOHN NIXON, Group Executive Director at Americas for ICAP

KRISTEN WALTERS, Managing Director, Risk and Quantitative Analysis, BlackRock

RANA YARED, Managing Director Securities Division, Goldman Sachs

LUKE ZUBROD, Director of Risk and Regulatory Advisory, Chatham Financial Group

JERRY JESKE, Group Chief Compliance Counsel, Mercuria Energy Trading

GLENN MACKEY, Chief Risk Officer, NRG Energy

TOM COYLE, Vice President and General Manager, Chicago and Illinois River Marketing

ANGELA PATEL, Fixed Income Trading Assistant, Putnam Investments

Panel II: How is the Market Using Portfolio Compression Today?

ED PLA, Managing Director, Head of Clearing Execution, UBS Investment Bank

PARTICIPANTS (CONT'D):

LUCIO BIASE, CEO and Founder and LMRKTS

CLAIRE LOBO, Global Head of Business Development, Markit Trade Processing

DENNIS MCLAUGHLIN, Group Chief Risk Officer, LCH Clearnet

MICHAEL MODLOCK, Head of triReduce North America, TriOptima

KIM TAYLOR, President Global Operations, Technology and Risk, CME Group

Other Participants:

VINCE MCGONAGLE, Director of Market Oversight, CFTC

SAYEE SRINIVASAN, Chief Economist, CFTC

DANIEL BUCSA, Deputy Director of the Division of Market Oversight, CFTC

LEE OLESKY, CEO Tradeweb Markets, LLC

NATHAN JENNER, COO Bloomberg Electronic Trading Business

ANAT ADMATI, George G.C. Parker Professor of Finance and Economics, Graduate School of Business, Stanford University

MARCUS STANLEY, Policy Director, Americans for Financial Reform

SEBASTIAAN KOELING, Managing Director, Optiver US

RICHARD MILLER

PARTICIPANTS (CONT'D):

STEPHEN BERGER, Director, Government and Regulatory Policy, Citadel Investment Group

SUSAN O'FLYNN, Managing Director, Morgan Stanley

* * * * *

P R O C E E D I N G S

(10:04 a.m.)

MS. WALKER: Good morning. As MRAC designated federal officer is it my pleasure to call this meeting to order. Before we begin this morning's panel I would like to turn to Commissioner Sharon Bowen, the MRAC sponsor for the welcome. Chairman Massad, Commissioner Giancarlo and Commissioner Bowen will then give their opening remarks.

COMMISSIONER BOWEN: Okay. I won't be redundant but I will say welcome again. Mr. Chairman, would you like to make a few opening remarks?

CHAIRMAN MASSAD: Sure. I will also be very brief. Thank you all very much. I want to thank Commissioner Bowen and her staff, particularly Petal and all the members of the Market Risk Advisory Committee for all the work that's gone into today's meeting and for being here. I'd like to also welcome all of you in the audience as well as anyone listening on our conference line.

I'm certainly pleased to be here along with Commissioner Giancarlo. You know, these meetings are very, very valuable to us. They're valuable not just for the input but also to have a discussion and an exchange of ideas. And so I know we're all looking forward to a very productive meeting today.

We'll consider two important topics. The first one is how the derivatives markets are functioning for market participants and in particular, the commercial end users who use them every day to hedge commercial risk. It's obviously a big question to cover in less than two hours particularly given that the markets are different for different products. But I look forward to the discussion. I'm sure we'll get into a discussion of liquidity.

It's an issue that's received a lot of attention lately. In particular as to whether post-financial crisis reforms how those might have affected liquidity. I believe we must always be willing to look at such issues and be willing to make adjustments if necessary. And I've noted, for example, my concern about the potential effects of the leverage ratio on clearing.

But we must also recognize that there are always many forces beyond regulation that shape liquidity and market structure. And so we must make sure any analysis is grounded in facts and not just suppositions. I'm also pleased that the panel will focus in particular in thinking about these issues on commercial end users.

As commissioners, all three of us, I think have sought to be very attentive to the concerns of commercial end users. And since we all took office in June of 2014, the CFTC has taken a number of actions to ensure that those businesses can use the markets effectively and efficiently. We've also taken steps to improve trading and access to the markets generally including with respect to swap execution facilities.

To that end, we've recently permanently

registered SEFs and have fine-tuned some of our trading rules and I hope that the Commission can consider a codification of those adjustments as well as potentially other changes to enhance SEF trading and participation in the near future.

We've also issued proposals on cyber security and automated trading which go to broader issues of market function and we are working on finalizing rules on position limits. So I look forward to continuing all this work and to the input of market participants so that we can ensure transparency, fairness and integrity in trading and create conditions that attract participants to our markets.

Second, we will explore issues related to the use of portfolio compression. This is an important tool to manage risk but I would note that as with the word liquidity, people can use the term to mean very different things. These can range from strategies that simply reduce notional amount to those that change the risk profile and may even increase notional amount.

So I look forward to hearing more about the types of portfolio compression strategies being used and the implications of those different strategies. So again, thank you all for coming. Thanks to my fellow commissioners and the CFTC staff and I look forward to what I am sure is going to be a very constructive exchange of ideas.

COMMISSIONER GIANCARLO: Thank you, Chairman, and thank you, Commissioner Bowen. Market participants know that trading liquidity is the lifeblood of healthy financial markets. Today there are increasing concerns that trading liquidity has been fundamentally changed in many asset classes and many markets and not just markets overseen by the CFTC.

Accounts of liquidity constriction extend from US Treasury securities to German bonds to corporate bonds to equities to US and Euro interest rate swaps, single name credit default swaps, cross currency swaps, repos and energy swaps and futures. I've been speaking about diminished trading liquidity for well over a year now but similar concerns have been voiced by the IMF, the Bank for International Settlements, the Bank of England, Fed Chair Janet Yellen, Stephen Schwarzman of Blackstone and noted economists, Nouriel Roubini and Mohamed El-Erian.

While some central bankers voice skepticism to a lack of quantitative evidence of illiquidity, there is real concern amongst those with financial market understanding and responsibility. Quantifying liquidity is certainly challenging but it's not impossible. It is more easily qualified through a range of characteristics such as market depth, width, volume, resiliency, immediacy, participation and turnover.

There is only small comfort in accounts of narrow bid offer spreads amid so much evidence of deterioration in the quality of many of these other fundamental liquidity characteristics. Diminished trading liquidity and the sharp volatility spikes that follow are rising threats to the healthy functioning of our markets.

My informed and considered view is that a significant, although not the sole, but a significant cause of reduced trading liquidity is the aggregate impact of uncoordinated regulatory policies of US and overseas bank prudential regulators imposed in the wake of the financial crisis. Most of these disparate regulations have the effect of reducing the ability of many small, medium and large financial institutions to deploy capital in trading markets.

The question that must be asked is whether the amount of capital constraint prudential regulators are placing on financial institutions is at all calibrated to the amount of capital those institutions need to deploy to support market health and vibrancy. Those of us with daily responsibility for overseeing financial markets need to ask that question.

We must understand the full implications of constrained capital on market health and resiliency and the ability of financial markets to underpin sorely needed US economic growth.

Vibrant capital and financial markets are essential to American free enterprise. And free enterprise is essential to American freedom and prosperity.

Needless to say, today's discussion is very timely. Today's second panel will explore portfolio compression. In my January statement on the final rule for margin requirements for uncleared swaps, I expressed some disappointment that the Commission decided to treat the results of portfolio compression of legacy swaps as new swaps subject to the margin rule. I warned that this may well discourage portfolio compression and I urged the Commission to revisit the issue.

In the preamble to the final rule, the Commission expressed openness to further consideration and I'd be pleased to know of any progress in that regard. I believe that portfolio compression is of great benefit to the safety and soundness of the market. And I believe it should be incentivized not penalized. Thank you all for participating in today's very important discussion.

COMMISSIONER BOWEN: Thank you. Welcome to the first 2016 meeting of the Market Risk Advisory Committee. I'm excited to sponsor this committee which is composed of a broad cross-section of market participants. I'd like to first thank the Chairman and Commissioner Giancarlo for being here today and their support for the work of this committee.

I also would like to extend a thank you to our MRAC members for bringing your passion and expertise to these important issues. Thank you as well to the staff, the Division of Market Oversight and the Office of the Chief Economists for providing technical support for this meeting. And last but not least, thank you to the logistical staff who worked behind the scenes to put everything together today.

One of the goals of MRAC, as noted in our charter, is to assist the Commission in identifying and understanding the impact and implications of an evolving market structure.

This is a very important role for this committee. Our markets have undergone a transformational change in how they function today. So it is extremely helpful to hear about the changing structure of our markets for a cross-section of market participants.

To that end our first session focuses on how well our derivatives markets are functioning. We will hear directly from end users and other industry representatives about things such as their ability access liquidity, effectively hedge and allow for price discovery.

There are a number of questions that are specifically on my mind. First as a commission we recently permanently registered 18 swap execution facilities. How are market participants using these SEFs? What are the positives and negatives of SEF use? How can we improve the way SEFs function?

Second, the role of introducing brokers appears to be undergoing major changes in our markets. How are IBs being used today? Do our rules, which were made for the IBs of the past, fit the IBs of today?

Third, how have changes in technology altered the ways in which market participants access the various markets? Have these changes introduced new risk? And if so, how can our rules better identify those risks and regulate appropriately?

And last, there has been a great deal of discussion recently about the level of volatility and liquidity in our markets. What are our market participants experiencing in regard to volatility and liquidity? I'm particularly glad that this discussion is broken up by product class so that we can get a more complete nuanced picture of the different markets we regulate.

I'm specifically interested in learning more about how effectively our end users in agriculture, energy and other commodities are able to find counterparties for their vital hedging functions. Our second session is also extremely important.

Based on the data we have collected, portfolio compression is widespread in our markets. It is imperative that we learn as much as we can about a practice that plays such a significant role in our markets today. I look forward to both of these panels and a constructive discussion. And I will now turn it over to Ms. Walker who will introduce the first facilitator in the panel.

MS. WALKER: Thank you for your opening remarks. As noted in today's agenda our first panel discussion will cover how well are our derivatives markets functioning from market participants, particularly end users?

Before we begin, I would like to note that we have members of our staff here on hand to answer questions and clarify current law and practice. Our director of the Division of Market Oversight, Mr. Vince McGonagle, and our Chief Economist, Sayee Srinivasan.

I would also like to introduce Mr. John Nixon, Group Executive Director at Americas for

ICAP, who will facilitate and help shape the discussions during the first panel.

MR. NIXON: Thank you, Petal. On behalf of all the MRAC committee members, I would also like to extend my thanks to Chairman Massad and to Commissioner Giancarlo for participating today. With particular thanks to Commissioner Bowen for organizing the MRAC committee and, of course, to Petal who's done an incredible job of putting this all together and keeping everybody in line. So thank you to all of you.

A couple of logistical announcements before we move on with the first panel. We'd ask that anybody who is speaking to please make sure that your mic is on and can you please make sure that you are leaning forward speaking into the mic so that people that are on the audio or Webcast can actually hear you. When you finish speaking, we'd ask that you please turn off your mic.

If you would like to speak, please just turn your card up and we will make sure that we give you an opportunity to participate in any of the discussions that you would like to be part of.

Today we have a lot on the agenda for the first panel. I'm not going to go through all of the questions that we have provided to some of the speakers as Sharon has just spoken about a lot of her interests and what she would like to hear. And I am -- I will not go through each question while we are going through the various segments.

But let me just start off by at least thanking and introducing the people that we have asked to speak today on the various products. First of all, on the CDS and IRS section, Kristen Walters is here from BlackRock. Rana Yared is here from Goldman Sachs and Luke Zubrod is here from Chatham Financial.

On the energy section, we have Jerry Jeske from Mercuria, Glenn Mackey from NRG. On the agricultural section, Tom Coyle is here from Chicago and Illinois River Marketing. And for foreign exchange we have Angela Patel who is here representing Putnam.

So thank you to all of you for taking

the time to put some thoughts into these questions and helping us lead these discussions. As we said, we have quite a bit to cover in a short period of time. So I would ask that everybody be as prompt as they can in responding to the questions that they've been given to discuss so that other people on the committee can actually weigh in on their particular views.

So let us start off with the IRS section. As I said, everybody has the agenda and the question and I'm going to turn the floor over to Rana to start things off.

MS. YARED: Thank you, John, and thank you to the Commission for having us here. I want to start by saying that Goldman Sachs has been a supporter of electronic trading for many years. Since 2010 we have been advocates here at the CFTC, at other regulators and at industry forums for the movement of the most liquid points, the 2, 5, 10, and 30-year in interest rates swaps and the 5-year point in the on the run CDS index to order books be that in their native OTC form or in futures.

We believe that a healthy market structure requires our clients to be able to both trade the most liquid products in a pre-trade anonymous order book and to access dealer liquidity on a disclosed basis for larger, non-benchmark trades that do not facilitate themselves for order book trading. It is this point that has led us to work with market infrastructure providers to create central limit order books and RFQ platforms for interest rate and credit products globally not just here in the US.

We have been users of SEFs since their inceptions and used them both on an electronic and voice basis. In the cases where we use the SEFs on a voice basis, we are both intermediated by introducing brokers and directly facilitated by members of the staff. In the nearly two and a half years since the inception of SEFs we have seen markets evolve in a manner that is specific to the products and the needs of each market participants.

We wish to note that we welcome the open membership model of the SEFs and believe that in certain respects it has been accretive to liquidity in the market. We also wish to acknowledge the burden that the commercial end users who trade infrequently have by needing to connect to some of these electronic SEFs.

In the CDS market specifically, we have seen the market continue to evolve and respond to SEF rules paired with its own market condition. This evolution has included an increase in fully anonymous order book trading. By that I mean anonymous on both a pre and post-trade basis for the on the run index five year point.

It's worth keeping in mind that unlike the rates market, the credit market does not have a liquid hedging instrument as a future. In the case of the rates market, it's what we -- it's the 5 year and the 10 year on the CME known in the industry as the FY and the TY.

The credit market also has more

concentrated market participants in terms of the breadth of the user base and less structural hedging where matching of exact cash flows is needed by our clients. While SEF execution has been beneficial in offering enhanced transparency to the market in a more stable market environment, we have noted that in more volatile conditions, we have seen a drain or evaporation of liquidity even in the credit market.

We also think it's worth noting that market adoption of order book trading has been encouraging in the last few months. While we don't feel comfortable sharing the exact numbers as they belong to the market infrastructure providers, we'll leave it to them to share those with you. We would note that since about October of last year to present we have seen an increasing uptake of central limit order book trading and credit index swaps. And that while that number is still nominal, we believe that this is the start of a greater trend. Again, a trend that is specific the types of users and types of products that exist in the credit market.

Anecdotally, market participants have told us in the credit market that they find SEF execution complexities for packaged trades to be incredibly challenging including for when you have a MAT trade against a mandatorily cleared but not MAT swap which is about two times the off the run market versus the on the run market. And that these complexities have been an impediment to role transactions that used to be incredibly frequent and routine in the pre-SEF world.

Again, in the spirit of answering the specific question about we believe this has impacted commercial end users, we believe that this reflection of challenges from our clients is on such example. Turning to the rates market.

Our clients continue to reflect to us that they wish to trade in RFQ or RFS fashion in order to obtain or hedge exact risk and because they believe that there's a benefit associated with the relationship that they have with the various dealers with whom they transact. In interest rate products, the dealer community has historically tailored trades to the hedging needs of clients and then, risk-managed those trades in a more generic fashion in the inter-dealer market.

We call it specific versus generic trading. In this respect, we have seen the inter-dealer brokers very naturally develop central limit order books around, again, those benchmark points. Because it's historically been in that environment where market participants have done their more generic hedging. And therefore, it should be more conducive to order book trading because the liquidity is congregated around specific points. We have seen these order books developed specifically at three of the inter-dealer brokers, ICAP, Tradition, and Dealerweb, a subsidiary of Tradeweb. And we believe that the development of these order books in more than one venue is a reflection of the comfort which the dealers have in trading in a central limit order book fashion for appropriate products.

Again, we note that the open market model has been accretive to liquidity and this particular venue of trading, though, on the whole, liquidity in the inter-dealer markets has decreased in both the dollar and the Euro market. To give a specific example which I've given before and retested prior to coming to this meeting, if you look at the interest rate market today of one of our clients which is to trade 25K of DV01 they have a wash of choice. 10 to 15 dealers or market-makers are willing to make them a price in that particular instrument.

We find that our clients are reflecting to us that they are much more challenged in the cases where they wish to do, let's say 250K of DV01 which, for the professional traders in this room will note, it's actually not that big of a size. There they find that they either have to break up their trade into multiple sizes or that the price becomes enormously expensive versus what they're used to having.

I do want to take a moment to pause on

the European market to show that these phenomenons (sic) are actually not unique in the US market. Risk Magazine in September 2015 actually did a study on the Euro swaps market to show that in fact significant pressures had changed the nature of that market. They posited that the pressures from capital and reduced liquidity in the Euro interest rate swap market and the future market called the Bund in Europe, should suggest higher prices for our clients and significant inability to transact.

Their studies showed that the size available for Euro interest rate swaps was actually one-half that which it was two years prior at the touch. Meaning immediately executable and that the depth in the Bund traded on Eurex was one-half the size it had been in their previous measurement period.

Just to give the group a sense, the Bund accounts for about 80 percent of all the initial hedging that happens in the Euro interest rate swap market. It's like losing the ability to hedge with the TY or the FY here in the US. At the same time, their study noted that clients had reflected back to them that pricing had remained largely unchanged which is good for commercial end users but that they found that liquidity was very challenged in the market which clearly is something that we all wish to address and remedy in a manner that is productive to the interest rate market.

Some would argue that the market structure in rates has not been conducive to liquidity improvement specifically because of the lack of a fully anonymous central limit order book both pre and post-trade. We believe that this argument is a red herring and look specifically to the experience that we've seen on Bloomberg where a fully transpa -- fully anonymous pre and post-trade order book exists in both interest rates and credit derivative swaps but only volume has picked up on the credit derivative swaps.

We believe this is indicative of the previous point that I had made which is that our clients in the interest rate swap market largely but not exclusively wish to match specific cash flows and therefore, want to do specific and (inaudible) trading which can only be facilitated in an RFQ model.

In closing, we believe that SEF implementation has met the CFTC's goals of enhanced electronic trading and we acknowledge that the market's response to the rule set is still ongoing and hope that we can be a productive member of the ongoing response. Thank you.

MR. NIXON: Thanks, Rana. Kristen, can I turn it over to you?

MS. WALTERS: Absolutely. Thank you very much to the Commissioners for having us and particularly to Commissioner Bowen. I am very happy to be participating in MRAC, the committee. I think that we have over the last 12 months actually done some -- had some very important dialogue around key topics that affect --

COMMISSIONER BOWEN: Kristen, can you just lean in a little bit closer?

MS. WALTERS: Sorry.

COMMISSIONER BOWEN: Thanks.

MS. WALTERS: Okay. Can you hear me now? Sorry. Do I need to start over or did you catch any of that? Anyway, my sincere thanks to Commissioner Bowen.

I think that in a very collegial, thoughtful and deliberate way, she has brought us together as a group with varying views in a collaborative fashion and allowed us to tackle many issues affecting risk. Issues that, you know, we're very concerned about from a BlackRock perspective in a highly productive way and I would say in general we concur, at least 90 percent with some of the specific dialogue that we've had as part of this committee. So thank you very much Commissioner Bowen for all of your efforts and ongoing efforts.

I would like to start this session and just speak briefly to BlackRock's views on market liquidity particularly in the fixed income market space. And I'd like to talk about both bonds and derivatives because they are structural in the sectoral changes in liquidity in both markets and the two markets are juxtaposed and very dependent on each other.

From our perspective, many of the changes are actually happening in bond markets but the proper functioning of centrally cleared for standard rates and credit products is absolutely essential to the functioning of the bond market itself. We use both rate and CDS extensively not only as hedging instruments but also as risk transfer mechanisms. So it's very, very important that both of these markets operate efficiently and in tandem.

So I think we would agree that there has been a very marked structural change in liquidity markets particularly in the fixed income space post-financial crisis. We view this as a direct consequence to actually appropriate regulatory changes to stabilize the banking sector and ensure sufficient dealer capital liquidity and reduced leverage. We do not feel that this has created a liquidity crisis but it has fundamentally changed the structure of both the bond and derivative markets.

And we feel that it -- there are necessary changes that have to happen from an infrastructure perspective to support a very discernible shift that has occurred from pure principal trading in bond markets where dealers essentially have balance sheets and inventory and are able to intermediate risk and make markets to much more of a hybrid agency principal market. Not the same as the equity market because given the differences in idiosyncratic nature and fixed income products, we can't have a purely agency model in fixed income. But we do need to be supportive of changes that have to happen with clearing of derivatives, with electronic venues, all to all trading in order to support this market.

So as a large asset manager, and I do think we have an advantage here and I think Rana's comments about smaller market participants and I think the impact on smaller market participants of many of the things that we're talking about today is much more pronounced. And I think that's the area of the market that we need to focus on to make sure that we can have healthy liquidity in the markets going forward.

So on a daily basis, we don't experience liquidity issues in the market given our size and our investment in infrastructure and electronic trading and straight through processing systems. What that means is that every day we're actually -- our traders who we physically separated from portfolio managers four years recognizing the importance of focusing on trading and the evolving markets, they are able to close each trading day. And essentially with having all trades executed effectively.

So we do not experience situations where we are unable to transact in markets on behalf of clients. However, we have had to fundamentally change our trading approach including breaking up our trades into smaller pieces and acting more as a price-maker. And when I say that I don't mean a market-maker, as well as a price-taker. Historically, we were price-takers from Goldman and Morgan Stanley and others.

And increasingly we reach out to regional dealers, other market participants and we are assertively making prices and we've implemented technology to enable us to do that in an efficient that we're going to keep investing to make this happen. So given the shift in markets, I do think it's more difficult for smaller market participants. Clearly, we've invested in technology over many years. That can create significant barriers to entry to smaller players.

So I think we should be very mindful of that when we talk about some of the issues today. So again, derivatives are critical to the proper functioning of the bond markets as a risk transfer mechanism. BlackRock has also participated in SEFs since inception. 100 percent we're mandatory and in other instances we use a combination of voice execution and SEF processing in non-mandatory products.

We appreciate the CFTC's efforts in developing SEFs and related trade execution regulatory frameworks particularly recently in the available, sorry, particularly what's available to the -- made available to trade determination process. I think that progress has been made but there's still work to be done. I would reference that we participated in a letter that SIFMA provided to the CFTC earlier this year on SEFs and trade execution. I think in general it's consistent with some of the comments that both Chairman Massad and Commissioner Bowen have recently made publicly.

And in particular, I would just like to cite that broadly we're very much in agreement with, Commissioner Bowen, your comments at George Washington Law earlier this year and recent comments by Chairman Massad. So I think we agree whole-heartedly in the work that the CFTC is trying to do in this space.

What I would say and I apologize, just

turning to my notes, that so the positive aspects of SEF from our perspective is absolutely improving transparency, encouraging broader market participation and more at time of trade transparency. I would echo kind of Rana's comments that the SEFs do add operational complexity not necessarily for us because our pipes are in place. But I think they do for smaller players in the market.

The ability or the need to connect to multiple SEFs and entities between SEFs and the clearing house makes it more expensive to manage from an infrastructure perspective. I think that we have 18 registered SEFs today. Each SEF has nuances and they are not the same. Also there are a number -- there's only a very small number of SEFs that have the sufficient levels of volume to allow us to provide the level of liquidity in markets that we think is required.

So I think and I believe Commissioner Bowen and Massad have made comments on this. We are 100 percent supportive of consistency and standardization of trading at SEFs as well as the overall SRO framework that's been discussed recently. One issue that I will note we do not connect to CLOBs today. We would like to. The impediment is the average pricing that we have in futures markets more broadly is not currently available in swaps.

I think and this is cited in a very detailed fashion in the letter to SIFMA that we participated in but I think it's important to mention and again, echoing Rana's comments that package transactions are a very important part of the swaps markets and for all firms to hedge and allocate risk. So we're appreciative of the CFTC's extension of the no action relief for package trades and we agree with, we hope for CFTC adoption of a permanent package transaction, regulatory framework.

From our perspective, the packages should not be subject to the trading mandates solely because one or more of the swap components meet the requirements for the MAT determination process. And we do think that the RFQ to three execution method may be inappropriate for package transactions. So we would certainly like some focus on the package transaction topic in general and I think very consistent with the approach that I believe the CFTC has been taking.

From a CDS perspective, we also use SEFs for all of our index products and we are starting to clear single name CDS and expect to do significantly more in the third quarter. From our perspective, it's very, very important for a proper functioning credit markets to have both the index and single name CDS when their standard cleared in part of the SEF process. And we would just state that without a single name market it's very, very difficult for the credit markets to function. And that's all for my prepared comments. Thank you very much.

MR. ZUBROD: Hi, my name is Luke Zubrod from Chatham Financial and let me just start by framing the basis for Chatham's perspective on interest rate markets. Chatham's the largest advisor and technology provider to end users both financial and non-financial end users. The common theme for all of our 1,800 clients is that they use derivatives for hedging purposes not for speculation or trading.

In this capacity, we assist them in hedging more than a billion and a half in notional per trading day. And in 2015, we provided advice and services on approximately 17,000 transactions, a little more than half of which were interest rate derivatives. We help our clients analyze their risks, develop hedging strategies to mitigate them and in most cases, execute transactions to implement those strategies.

The functioning of the OTC derivatives market varies based on factors such a regulatory classification and the standardization of trades. These factors give rise to different segments of the market including those that use SEFs to transact cleared swaps, those that transact cleared swaps by voice and those that transact uncleared swaps by voice. That is the traditional bilateral swap market.

My comments will be focused on two of those segments, SEF-traded cleared swaps and traditional bilateral swaps. With respect to the former, for many of our clients, there are some notable improvements in market function. Again, we're talking about SEF-traded cleared swaps.

Bid offer spreads have narrowed considerably. Prior to market structure changes, some clients paid as much as two basis points in transaction costs to establish and terminate a substantially collateralized position. Now clients can execute this combination of trades at approximately.2 basis points.

This predominantly is a function of the ease of competition facilitated through SEFs including the ease of competition when terminating transactions. In a recent transaction, for example, we were able to simultaneously take off two swaps and put on a new $500 million swap in seconds with quotes from four banks. A process that would have been more cumbersome and inefficient in the past.

This benefit does come at a cost and the cost is largely a function of the cost of funding initial margin and clearing related fees. The net cost benefit is not the same for every market participant and varies with factors like transaction volumes. This cost-benefit is overwhelmingly negative for market participants that transact in small volumes creating significant barriers to accessing the OTC derivatives market for some market participants including microfinance funds, real estate funds, some leasing companies, credit card processing companies and others.

Such entities face substantial minimum fees roughly $100,000 per year to establish and maintain a relationship with an FCM. Consider a microfinance investment vehicle hedging interest rate risk in connection with loans made to institutions that in turn provide capital to the world's poor. Now microfinance investment vehicle is a financial entity subject to the clearing requirements.

However such an entity's transaction volumes are often too low to justify for them what is a substantial annual minimum fee amounting to approximately half a million dollars over a five year period. Such firms presently fact the choice of not hedging or of hedging suboptimally, using products that do not perfectly address their needs, for example, Euro dollar futures, standardized products that cannot be tailored to perfectly offset the risk arising from common forms of commercial financing.

The Commission could and should intervene to address this concern by exempting financial entities that transact a de minimis volume of swaps, a so-called little guy's exemption. I now turn to the traditional bilateral swap market, largely comprised of entities transacting under the end user exemption from clearing and SEF trading.

End users have substantially adjusted to Dodd-Frank's administrative burdens. And they continue to be able to efficiently execute many common hedges including hedging shorter dated exposures ranging from one to five years or more. However, pricing for longer dated swaps has materially increased. For example, the charges applicable to a 20-year swap used to hedge an investment grade corporate's fixed rate bonds has more than doubled relative to precrisis levels.

Capital requirements and market factors including bank funding charges contribute to this increased cost. These costs encourage end users not to hedge longer dated exposures or to consider collateralizing trades that would otherwise be eligible for the end user exemption effectively partially negating that exemption. As margin and capital requirements are fully phased in, end users remain concerned about the impact on transaction pricing, a concern that translates to real economy impact.

There are several other issues notably affecting the functioning of the market for end users. However, like the cost impact on longer dated trades, these concerns are generally not those in which Commission intervention would presently be fruitful. They are more likely the product of Federal Reserve policy rather than the derivatives regulation under Dodd-Frank.

In the interest of time, I'll highlight one such issue negative interest rates as an example but there are other issues including negative swap spreads, the implications of which are similar. In particular as it relates to the need or not for Commission intervention.

The prospect of negative rates has created unprecedented hedging challenges for end users, in particular because bank stress tests require banks to contemplate negative rates in their models. Banks are putting zero percent floors in commercial loans provided to end users. In other words, if LIBOR goes below zero, the LIBOR rate used to calculate the floating rate on the loan will be fixed at zero.

Borrowers desiring to swap their floating rate loans to fixed must contemplate the zero percent floors in their loans when trying to construct a hedge that perfectly mirrors and offsets the economics of their loans. They do so by buying back the floors they are short in their loans and embedding those floors in interest rate swaps that then perfectly offset the risk profiles of their loans and consequently achieve favorable hedge accounting treatment.

However, buying back the floor is costly adding approximately 20 basis points per year to a five-year loan. This amounts to approximately $1 million in additional cost over the course of a five-year $100 million loan. This problem arises from government monetary policy as well as bank stress testing protocols not from derivatives regulation.

Consequently, we don't think actions by the CFTC would be fruitful in moderating the negative outcome for end users. Nonetheless, we mention it here as a point of interest on market functioning for end users and to assert that not all such market problems need be or can be satisfactorily addressed by Commission intervention.

As a consultant, I can't help but suggesting a framework for considering how the Commission might prioritize interventions to address market functioning concerns. We might sort any regulatory initiative focused on improving market functioning into one of four quadrants in a two by two grid where those quadrants are expected and unexpected outcomes on the vertical axis and costs and benefits on the horizontal axis. And I submit that the Commission might reasonably prioritize those initiatives that address the unexpected costs of regulation.

And I believe the intervention I suggested, a financial entity's de minimis exception fits squarely in this category. Thanks for the opportunity to offer our perspective on these issues.

MR. NIXON: Thank you, Luke, and thank you to all of our speakers for taking the time to put together their thoughts and sharing those thoughts with the Commission. I'd like to actually maybe take a couple of minutes right now and open up the floor to other participants on the MRAC and also to the Commissioners who might have some questions either to any of the participants but particularly to the participants that took the time to speak to us today.

If I could throw out one question just to get things started, Rana mentioned that most of the trading that the end users have been doing on interest rate swaps is really in the RFQ market as opposed to the central limit order book. And highlighted the need for matching cash flows on their swaps and identified some of the reasons why she felt that that was why that part of the marketplace, the central limit order book, had not taken off.

Kristen, I just wanted to see if you had the same views. You mentioned average pricing was one of the reasons that you weren't using the CLOBs in interest rate swaps and I was just wondering if you could just comment as to whether or not that is the only reason, primary reason or what you think it might take for central limit order books to take off from an end user perspective?

MS. WALTERS: Well, I mean, I think from our perspective, and again, we're a very large firm with a well-developed trading platform that connects to many different trading venues. So for us, yes, it's the average pricing that's the issue. I would agree, I mean, I do agree for other smaller end users there's operational complexity there.

So it's not insignificant for us to connect to the CLOB. We're willing to make the investment. We're waiting for the average pricing but I can see how it could be -- there could be significant barriers to entry for other end users.

MR. NIXON: Okay, thank you. Are there some questions that the Commissioners would like to start off with? And --

COMMISSIONER GIANCARLO: I have a question for Ms. Walters. You mentioned the importance of a functioning single name CDS market for a healthy corporate fixed income market. That CDS market, single name CDS, has gone pretty quiet in the last few years. What would you suggest perhaps as a way of seeing some vitality come back to that marketplace?

MS. WALTERS: I mean, my personal view is that central -- encouraging central clearing and execution via SEFs similar to the interest rate markets is important. What's interesting, there has been, given the low prevailing interest rate environment due to monetary policy for so many years now, there has been a tremendous amount of or proliferation of an issuance in fixed income markets and in investment grade and high-yield bonds.

And what you find from a trading perspective is that if you look at volumes, if you look at a lot of traditional indicators around market depth, immediacy, turnover, the numbers actually look like they're fairly reasonable. However, if you look underneath the covers a little bit more fully, what you see is that there are thousands of bonds in the corporate credit market that are out there but the overwhelming majority actually don't trade every day.

So the trading is almost entirely in a very small number of large currently issued bonds. So what that means is that if there's the desire to trade, it actually may not be that easy to do in a lot of the off the run issues. So the single name CDS market becomes quite important as a hedging vehicle to complement what's happening from an index perspective.

So that's not BlackRock's view. That's my personal view and I think we, as I mentioned, are starting to clear which is the first -- is the precursor to executing on a SEF but I think that would be -- I think OTC, traditional bilateral trading in these markets is potentially why there hasn't been -- they've been quieter.

COMMISSIONER GIANCARLO: Do not those same liquidity factors that you just described in corporate fixed income, though, also apply to the single name CDS, that is that only in a narrow band do they trade with any degree of liquidity and outside that band there's very infrequent trading in most single name CDS?

MS. WALTERS: Yes, absolutely, I do -- it's, again, my personal view that if single name CDS were clearing along with index CDS through exchanges that that might change liquidity. Certainly, it's more difficult when the bonds and the CDS aren't priced every day but on an exchange mechanism you absolutely have the price transparency which I think we've seen and the rates market is good for liquidity.

I'm not sure what others would say. It would be great to hear thoughts from my colleagues but that's my personal view.

MR. NIXON: We talked a little about volumes or the lack of growth in volumes in some of these marketplaces. So I thought I might turn to a couple of the other members of the MRAC in case they had any particular views as to whether perhaps the lack of volume growth in the swap market or in the CDS market, you know, was it tied to the interest rate cycle? Is it tied to bank capital requirements? Perhaps to the regulatory rules of trading around the SEF markets. Is there any particular major reason that sticks out in your mind as to what could be impediment to volume growth in the marketplace for CDS? And I know we -- or sorry, or CDS.

I know we have a couple of the venues here. Lee is here. Nathan is here. Don't know if you have any particular comments but I'm sure they'd be interested in your view on why you think the marketplace may not be growing as it has in the past.

MR. OLESKY: Yes, thanks, John. Rather than dive into that, I think what I'd like to do is just put a little perspective on what has happened in the last two years post-SEF introduction. So as much as the market has slowed down, and I think there's a lot of reasons related to regulation, capital constraints, et cetera that we could all talk about that are the main driver of that, one thing we should take a step back and put in context is how much volume has actually migrated to electronic platforms that are now SEF-regulated.

Those numbers have gone up many, many fold. So if I look at the numbers on Tradeweb in terms of either the rates market or the CDS market, 10, 15, 20 times the amount of volume that we saw pre-SEF is now trading in an electronic environment with hundreds of customers doing hundreds and hundreds of trades every single day. So the transition onto the SEF environment has actually, I think we should take a step back and say that's gone incredibly well.

The issues of liquidity and volumes in the market are really not tied to sort of the SEF situation in and of itself. I think they're much more tied to regulation, capital constraints, P&L pressure, the incredibly low rate environment. I mean those three right there are the big, big factors.

But when we look at SEF implementation

and increased price transparency in the market, increased stability for the market through centralized clearing and enhanced processing of the entire trade cycle, I think we've done quite well in the last couple of years as the introduction of SEF has really taken hold.

MR. JENNER: I would -- oh, I'm sorry. I was just going to agree on a couple of the observations that were made. So I agree with Lee's point. I think the introduction of a SEF model has made people think much more about e-trading as an option for even other asset classes that aren't necessarily mandated or made available for trade.

So I think that's a positive. I also agree with Rana's observation just based solely upon Bloomberg SEF that we do tend to see much more robust flow in the order book around credit derivatives than we do for rate derivatives. It's essentially the same product that we offer for both markets but we have much less demand for the rates order book. And I think Rana pointed out some of the structural components related to the instruments that may cause that index CDS especially a fully fungible instruments with some specific tenor points. Rates are not that.

So that's probably the most obvious reason why that may be the case. I think the third point that I'd make is I think one of the goals of SEF implementation was to facilitate and help more entrants into the marketplace. And at least in our experience, we have seen non-traditional liquidity providers participate and make markets on our SEF as well as the sort of usual constituency as well.

So we view all of those things as reasonably positive or as sort of expected behaviors.

MR. NIXON: I'm going to take one more question then we're going to go on and hopefully we'll have time to come back to some of the other questions or we won't get, obviously, through the four segments. Thank you.

MS. ADMATI: Okay. I just want to make

a quick comment and I'm speaking actually for, well, I'm speaking for the people out there like many of them. I'm not representing actually any particular interest in these markets and I'm not a participant in these markets but I am an academic and I understand the markets, not necessarily the details.

I just wanted to comment on the point about volume and about liquidity and that is just the following observation. I understand that the livelihood of some people and some people's organizations has to do with the ability to trade and that the livelihood of some people is about volume of trade. But I don't take either of these as a necessarily -- obviously everybody who wants something wants to get it right away but usually in economics we have prices for things.

So I just want to say that, you know, the fact that there are a lot of securities out there and that there are more securities that have been created in this world and we study the world of complete markets or incomplete markets and want to have a lot of markets, does not imply that in every given moment of time there has to be two sides to a transaction that want to trade in a particular thing at the price that each of them feels is the right price.

And so from the perspective of the economy out there, the real economy, the businesses, the individuals, I don't know that it's a priority for the world that there is a trade every second in every security in every price that people feel like it. And so I just want us to step back from the fact that somebody wants to do something at a given moment and ask ourselves what, you know, there are lots and lots of bonds that are not trading at every second and it's okay. Not every CDS that's anybody's come up with needs to trade every split second.

So it's not for me an objective per se that there is what somebody might call liquidity which is they convert a piece of paper into cash right now this minute at this price that they feel is right for it. There are two sides to this transaction and they will evaluate it. And if there's uncertainty by the value of it, the liquidity will suffer and liquidity is something that can exist one day and disappear the next day for these risky securities.

So I just want us to remember that because it seems as if liquidity per se is like a national objective here and we should remember that we're just allocating, you know, resources to things and trying to manage risk for the economy as a whole through all these wonderful things that we teach our students about how to use effectively. And we want them to be traded.

To the extent that the regulation is blamed, I just want to add this one comment and I'm, of course, a big advocate of capital regulations. I think everything that's bad about the impact of regulation is because regulation itself is badly managed and distorted. And so I have a lot of criticism of capital regulation and certainly, of liquidity regulations to the extent that they are harming what should happen. Then they are dysfunctional.

MR. NIXON: Okay, thank you. We'll come back to some of the others if I can after I turn to the other segments.

So if we can go to the energy, I think, sector is next. Glenn, I think you were going to lead off?

MR. MACKEY: Certainly, thank you. Can everybody hear me okay? I'd like to thank the Chairman and the Commission for having the opportunity to speak on behalf of some of the energy users. The light's on. Can you hear me now?

Just to start off, from our perspective there has been a fundamental change in the way the companies are accessing markets specifically and including both physical and financial. Where we once had banks as counterparties and financiers that has gone away.

We're now seeing physical asset players go back to bilateral arrangements in a lot of situations. Well, that has also had a change on both our credit portfolio and the type of counterparties and transactional entities that we participate in.

In the financial energy markets, the market continues to place its risk on the portfolios of a few clearing houses alone. Much of the business is done on ICE for its liquid markets, ease of use and variety of products. CME is also getting a share of the market but in the past few years, as well as others, they're trying to define themselves to compete with the two largest DCMs, that being the CME and ICE.

When Dodd-Frank was passed, regulators and market participants had two primary concerns and I think that one was that the business would be forced to move offshore and secondly, that the market would move into futures and put a financial strain on the clearing houses. To some degree, both instances have happened and by far, energy swaps have largely moved into the futures market.

The futures market for this hedging activity provides a number of challenges, though, such as the strict contract definition that futures mandate. Swaps provided customized, more comprehensive hedging opportunities because of that and are still getting done in the marketplace albeit more on a bilateral perspective.

So from an end user's perspective, we're generally accessing the financial energy market via two constructs, the first being electronic brokerage platforms such as ICE, NYMEX, Nodal. And secondly, using introducing brokers over voice lines associated with a clearing entity or FCM. You know, typically, from my perspective and with our firm, the majority of transactions are cleared through the DCOs.

For energy, and I'm speaking only about energy, SEFs, to some extent, are somewhat redundant for us and create challenges such as cost, operational complexity and more additional risk as far as staffing as well. We do not typically use SEFs because the transactions can be traded and cleared through swap futures through ICE. And any swaps elsewhere in the business are directly considered counterparty swaps for the most part primarily because of the bulk and unique nature of where we want to hedge or transact and the nuances associated with that.

With respect to access to the market, what was once an over the counter market that offered futures clearing such as ClearPort has now transformed into classic futures market where entities have been DCMs such as ICE. And this has facilitated the change. No longer do we have prime brokerage arrangements with banks which now forces individual counterparties and smaller entities into the markets.

Swaps done between individuals and swap dealers will now be cleared with these dealers and charged margin which increases the cost to the end user and to market participants. As electronification of the markets increase, the need for brokers has decreased, while we acknowledge that brokers still play an important part in the options market since their products are less standardized.

With respect to the comments made in relation to liquidity, one of the comments I'd like to make is that ultimately if there is a lack of liquidity in the swaps market or the ability to hedge whether it's production assets, load assets, renewable assets, ultimately the energy companies then wear more risk within their portfolio. And the cost associated or the risk associated with it ultimately gets passed on through to the end users.

So while academically there are some comments that suggest that this is not necessarily efficient, my primary concern there would be is where we have an inability to provide liquidity to properly hedge and manage the cash flow and the anticipated cash flows of an organization such as an energy company where you have extreme volatility in the margins overall, ultimately any change in the cost or added cost because we wear risks that we don't want to warehouse and the banks are not doing that for us, ultimately is a pass through to the end user including myself personally from that standpoint.

Jerry, I don't know if there's anything you want to add then?

MR. JESKE: You can continue. I'll be jumping in there.

MR. MACKEY: Sure, okay, thank you. With respect to liquidity, you know, my observation is that with few banks warehousing risk market liquidity has deteriorated for us as end users. From the perspective of are there barriers to access? Essentially for larger participants, I would say no but smaller players and asset hedgers do have less access to the market if they have or the inability to post the appropriate collateral or meet the appropriate credit thresholds requirements by the other market participants.

With respect to recommendations on how regulars can enhance market participant access to markets, one of the things that would be helpful is to remove the swap data reporting requirements on the end users themselves. Albeit that's not necessarily probably where we're going but the high credit requirements, exchange margining mechanics limit the ability for smaller physical asset owners to access markets as I mentioned before.

And the issue that for end users are really related to access not through the FCMs or the market that way but for things like the lack of liquidity, fewer products and tenors being offered by the exchanges, and the overwhelming impact sometimes of some of the ETF money in the market and the volatility it plays.

MR. JESKE: So my name is Jerry Jeske. I'm from the Commodities Market Council and I'd like to thank the Commissioners and the staff as well for being here. Folks that are in this room who help craft the regulations that many of us have to operate by.

On behalf of the Commodity Market Council I'd like to actually people use the word end user a lot. But I think Anat from real markets hit on a key concept here and that's the real businesses. So I'd like to speak on behalf of the real businesses. Those businesses that keep the lights on in this room, the businesses that bring gasoline to the gasoline pump, the businesses that raise food out on the farms and bring it to people's tables, the real businesses of this world.

The real businesses have a place in the markets and that's risk transference. We talk a lot about liquidity. We're concerned about liquidity and we're concerned about it for good reasons. And that is without liquidity or without the ability for people to transfer risk, there is added risk for those real businesses. And those real businesses may not hedge and if they don't hedge, buy insurance, pass that on to others to be able to take those risks, the whole system will fail.

And so I think that's a great point, Anat, from real markets, and I really want to be able to address the fact that real businesses need these markets and in a well-regulated fashion.

What we're seeing, to answer some of the questions that were put out here, are SEFs being utilized by the energy markets and the agricultural markets and the answer is no. And I'll say no because of the 1.35 hangover.

So essentially you had this regulation out there for the last two and a half years, 1.35, that put on extra cost and extra burdens on folks. Since the relief that's been offered up by the Commission thankfully in December, that has changed things a bit. So a non-registrant now doesn't have to face the prospect of added costs through 1.35. I think that's a good outcome. However, that was just December.

So the utilization of SEFs isn't going to immediately occur in the energy and the agricultural space because of the concern of registration. Registration means cost. So whether it's become a registrant in terms of a swap dealer or a registrant in terms of 1.35, it is about cost. You can't participate in the markets if there's too much cost.

Are there visiting introducing broker concept? So I've been involved in the markets for some time back in my days at the Chicago Board of Trade up through various different positions in my career and I've seen a transformation occur. Introducing brokers were a concept as it relates to access to pits. The pits aren't around anymore. They're electronic marketplaces.

Those electronic marketplaces are a good thing for the most part because the middle man has been taken out of the equation. So the introducing broker concept, I would actually change to say are there brokers whether it's ICAP or Bloomberg or Tradeweb are essential to the marketplace but from a bilateral standpoint not so much from an access standpoint to CME, WebICE, CME Direct, trading technologies. These platforms are access to the market that many people do, in fact, have and utilize.

So the concept of introducing broker I think is a little bit misplaced and ought to be thought of in terms of broker. And where is that broker facility happening? In the energy and the agricultural space, it's with respect to bilaterals. So when you participate direct with the counterparty, you're looking to transfer risk. And if you can't transfer that risk, whether it be a swap or a physical asset, meaning a cargo, for instance, you're looking for an ability to sell or buy that commodity and move that commodity.

So brokers are very helpful in that space and very needed. When it comes to access to futures, they're really not needed. You have the direct pipe now to the exchange. Although, I think Luke mentioned something that I think is pretty important and that is what fees are associated with that process? How do you get electronic platform if you're a farmer sitting in Iowa? Well, that's not so easy because you have to have connections to the exchange. You have to have a clearing account.

And I applaud the Commission particularly for taking on Basel and the added costs for FCM community. Those added costs are being transferred onto others. My particular organization, we've decided to try to get away from that cost by go self-clearing. But going self-clearing isn't easy. You need to have critical mass to get there.

So for the end users, the real businesses out there, access to clearing is very important. The ability to self-clear is a wonderful concept. It's still very much in its infancy. And I think it's something that the Commission might want to think about.

With regard to let's see, our next set of questions, how the ways the market participants access the market? As I was just mentioning, the various electronic entry to the marketplace is a wonderful thing. We've got a draft regulation out there called Reg AT. Reg AT threatens some of that. I would suggest that the comments that have been registered by various industry participants, by those end users out there, by those real market participants, I would ask that the Commission take a very good look at those comments.

Because to overreach with regard to Reg AT won't solve any problems particularly for those that are using electronic markets not as algo traders necessarily but to be as a conduit to the marketplace. It's a wonderful thing and the costs will go down as long as you're able to put that infrastructure in place. Are there recommendations for the Commission?

I think I've mentioned some and do market participants see any inherent risk to the markets that the Commission should address? One of them is the $8 billion ratchet down. The $8 billion ratchet down December of 2017 is looming on the markets. I think the folks that spoke earlier talked about some of the deferred swaps that are out there, the long-tenored swaps, the 10-year swaps and that costs associated with it.

I think I recall somebody saying they doubled in value. Well, why do you think that's the case? Because people can't predict whether or not they're going to be a swap dealer two years from now. They don't know. That's registration.

That's regulation. That will cost people tremendous amount of money if they become registrants.

That should be addressed sooner than later. It hasn't been addressed and the ratchet down to 3 billion will cost end users a lot of capital. To be whether the capital rule takes effect or not, it's going to be an added cost that people can't determine. That's why the cost of deferred swaps.

So it's the same concept for those, again, those folks in the real marketplace, those real businesses. It's tantamount to not being able to buy insurance. And that's not a fun concept when you think about it because then you're taking on risk that you really can't manage very well.

One last comment I would say is in regard to the fees that have been discussed in Congress and I know the Commission can only do so much in this space. I would caution added fees associated with transactions, I think we've gone down this road many, many times in this history of the CFTC and I think there's been good advocacy on the Hill in connection with this but it always comes up. And those fees are going to end on those folks that use the markets. No two ways about it. The fees increase, the costs increase for everybody. So with that, I'll leave it to you, John.

MR. NIXON: Thank you, Jerry and Glenn. First let me turn to the Commissioners. Is there any particular questions that you might have for any of the speakers? If there's some questions from the other participants I'd be happy to take them. I would ask -- can I ask one question of perhaps Glenn.

You mentioned that you don't really use the SEFs that much anymore. Most of your business is going through the exchanges directly using direct access to those exchanges. Given the fact that the OTC markets have a lot more venues to operate on, a lot more flexibility on how you operate in those marketplaces, is there concerns that the limited venues for trading on the listed markets, is that a concern for any of the users? It sounds like most of the business that you're doing is in the CME or on ICE. There are other places I'm sure as well but I was just wondering if you're concerned at all about the consolidation in that marketplace and the potentially lack of options over the course of being able to execute?

MR. MACKEY: Yes. I think the short answer would be yes, we are concerned about that because you're placing a lot of concentration and very few number of market participants being the exchanges. Having said that, the key to some extent is adequate price and adequate liquidity. So if it's through the swap dealers on the bilateral side or if it's through the exchanges, we're looking for a balance there that ultimately at the end of the day provides us with the ability to hedge and monetize where required the portfolios that we have.

And at the same time, ensure that we've got a balance on potential exposure to market events where the market events, if there is any sort of meltdown, you've got a concentration there with very few participants which typically in past in the -- when the ISDA was a dominant agreement, you could manage the exposures on a credit basis through the portfolio with different contract provisions. You don't have the ability to do that now with some of the entities that are more structured and centralized.

MR. NIXON: Okay, thank you. Do you have a question?

MR. STANLEY: I had a comment. I just wanted to underline what I think for the Commission what I think is the importance of doing data-driven objective and universal analyses on these issues as opposed to anecdotal analysis. The input from market participants on this committee is, of course, extraordinarily valuable and I think it's great that we put together a forum to do that.

But one thing, when we look back at the history of discussions about regulation over the last couple of years, we find that analysis often comes up with a different answer than some of these anecdotes that you hear from market participants. We heard from a long time from market participants about declines in liquidity in the corporate bond market.

But recent work by the New York Federal Reserve shows, I think, pretty conclusively that liquidity in that market has not declined. This is not simply based on bid-ask spreads as Commissioner Giancarlo mentioned but also on price impact, on price dispersion, on liquidity and volatility risk. In fact, many of these core liquidity metrics turned out to be at record lows when they were measured.

Now there were some measures of liquidity risk that increased in the Treasury market but since the Treasury and corporate bond markets are equally affected by regulation the conclusion to be drawn there was that changes in market-driven trading practices such as increased electronic trading for treasuries were the source of that divergence.

Now there hasn't been that much, I would say, definitive work on the liquidity of impact of in derivatives markets of new regulation. But earlier this year we did see, I think, the first really high quality study on that, a Bank of England study by Benos, Payne and Vasios, that look at complete London clearing house transaction date in the interest rate swaps market.

They used the difference between transaction costs in the US dollar swap market which is subject to the SEF mandate that you had put in place and transaction costs in Euro markets that were not subject to that mandate, to do what I think is a very good estimate of the economic benefits of pretrade price transparency. They found those economic benefits were very large. Reduction in execution costs of $20 to $40 million daily and reductions and costs for end users of $7 to $13 million, again, daily. These are very large benefits.

I don't believe they stratified by end

user size in their published paper but I think their data should allow them to do so. And I think that's something that the CFTC economists should maybe contact them and ask about.

So I think that I just want to encourage the Commission to try to do similar objective and universal data analysis on derivatives markets in order to draw its conclusions about the impact of its regulations on liquidity conditions and hedging needs in these markets because I think they can often show a different picture than what you get from input of market participants. Because it's interesting that the Bank of England study did show a reduction in inter-dealer trading, something that actually would reduce profits for some market participants. But that that produced benefits for end users.

I want to make one final additional point regarding the results of data-driven examinations of these markets, a point that may not make me very popular here. There has been a recent set of academic examinations of newly mandated accounting disclosures on end user use of derivatives. And these accounting disclosures were only mandated in 2008. So they're only becoming available now.

These studies found -- examined a random sample of energy company end users and they found that two-thirds of those energy company end users use swaps for non-hedging purposes. Mostly for earnings management and that the use of those non-hedging swaps were associated with increased, not reduced, earnings volatility. We should not assume that all end user swaps are strictly undertaken for hedging purposes although there is no question, of course, that many are, many perhaps most are.

We, you know, end user, real economy end user companies that have been keeping the lights on for well over a century in this country but the increase in over the counter derivatives in swaps markets, the great growth in over the counter swaps markets dates back, I think, less than two decades in terms of when these markets really took off. So clearly there are mechanisms by which end users can manage risks through futures markets, through simply managing their own investment and spending flows that don't only rely on these over the counter derivatives markets.

So anyway, as I said, I encourage the Commission to look closely at this data and try and do their own economic analysis.

MR. NIXON: Tom, I can I turn to you?

MR. COYLE: Thank you. Today I represent the National Grain and Feed Association. The NGFA represents members that provide prices to producers for physical commodities and transport, store, process and distribute that production to end consumers.

I also manage a company that operates the largest Chicago Board of Trade delivery facility for soybeans and corn in Chicago. It's also one of only two facilities. It's regular for delivery on corn, beans, wheat and oats.

My comments today will provide the perspective of those that participate and handle physical commodities. Specifically to your questions that we'd received about market access, today ag participants use the standard FCMs and IBs and also direct electronic order entry. I would say for commercial participants direct orders to the pit have been replaced by an electronic entry system.

As for the use of SEFs, swaps are not used in the mainstream for traditional ag participants. Swaps are used primarily for ethanol, for some innovative pricing contracts for producers or end consumers and in transaction design to secure financing. Use of IBs, IBs are used primarily by smaller market participants, current country elevators and end users. IBs tend to be more service oriented.

IB activity has become more challenging due to increased recordkeeping and cost which have not been offset by increased fees, also by the reduction in the number of FCMs many of whom will not accept IB business.

Next question, are there end users --

are the end users --

MR. NIXON: Tom, can I just get you to move forward a little closer to the mic?

MR. COYLE: Certainly, John.

MR. NIXON: Thanks.

MR. COYLE: Our end users, particularly small end users able to access the market effectively. Order entry has improved dramatically for all market participants due to the electronic advances. However, smaller end users likely find it more challenging to support -- to find support and advice due to the shrinking pool of FCMs, many of which will not service IBs.

I understand that the FCMs have dropped to 47 from 150 and I'm told only 12 of the 47 will accept IB business. The primary reason I'm given for the drop in the FCMs is the more stringent regulatory requirements, increased oversight requirements, risks of fines, legal fees, cybersecurity and audits.

As far as the benefits and drawbacks of the current access, the benefits, the key benefit is the efficiency of order execution. It really is quite impressive. Also the CME has developed tools to enhance the ability to tailor risk management solutions. CSOs, calendar spread options and short dated options have a range of uses that have become quite popular.

The drawbacks, the advancements in technology and the dramatic increase in new financial participation, hedge funds, index funds, ETFs have created a macro shift in market dynamics that is truly concerning particularly for traditional hedgers that produce, transport and consume the underlying products.

Actual S&D and commercial hedging is significantly less relevant to daily price discovery. Overall, markets tend to seek fair value particularly during the expiration process but short term trends and daily movements are much more influenced by money flows in and out of the market.

There are other negative side effects to the electronic advances from microseconds to nanoseconds. Commercial hedgers are at a disadvantage as it relates to speed. Algorithmic trading sends misleading indicators to the market and, at times, are designed to push the market into voids in liquidity. Things like spoofing simply did not last in the pit environment because there was real time enforcement.

The electronic order systems also reduce the amount of information because nobody knows who's trading. In the past with manual order entry and the pit environment, market participants got at least an indication of who was trading the market. Today, I would say technical or financial trading leads the market more often than the price activity of traditional hedgers.

As far as liquidity and volatility, there is obviously a lot more volume which might suggest more liquidity. But I would say that order flow tends to be more one-sided and more violent and creates more violent moves due to the speed of the trading systems. I'm not sure if statistics would confirm the reduced liquidity and the greater volatility but from a grain trading perspective, I would say too often price movements appear random which plays havoc on reliable risk management.

As far as barriers to access, there is some loss in access due the drop in FCMS but overall there are no real barriers. However, balance in access has changed. Traditional hedgers would historically have led the market now find themselves one millisecond or many nanoseconds behind financial market participants.

As far as recommendations, first more transparency. More detailed and timely trade data. The current commitment of traders report is issued on Friday with information as of Tuesday. With the current technology advances, shouldn't such a report be issued daily or at least a Friday report that has data as of Thursday?

The CME daily trade report shows the previous day's trading, volume and open interest. It would be a lot more useful if we knew who traded that volume at the same time.

Communication and oversight of the DCM trade matching systems to assure that they are fair to all users and that they're consistently applied.

I would say consider implementing rules that require a minimum of two to three second duration for algorithmic trading orders so that orders can't be pulled before they're executed. Finally, for the Commission to embrace a broad definition of bona fide hedge for participants that are engaged in handling, processing, storage and distribution of the underlying commodity. The foundation of the ag markets depends on the participation of those involved in the fiscal market. This should be encouraged.

Risks that the Commission should address. The Commission needs to be vigilant to identify any process that systemically provides an advantage or disadvantage to one market participant over another. Such advances and disadvantage represent a risk to an early-functioning market. Also to watch the changes in market participants that reduces the relevance of hedging from producers, processors, distributors of the underlining commodities. And I'm happy to answer any questions.

MR. NIXON: Thanks, Tom. Commissioners, any questions from you directly? Any questions from MRAC? All right, thank you very much, Tom.

MR. STANLEY: Just a quick question. I heard Jerry saying some things that were critical of Rule AT (sic) and just heard Tom saying some things that there were some real issues in terms of algorithmic trading that we need more limitations and controls in that market. So I was just wondering about your view on Reg AT and whether the Commission is moving in the right direction?

MR. COYLE: I don't have a comment on that. I'm sorry.

MR. JESKE: I'll be happy to clarify, though, Marcus. If you read Reg AT which is a pretty long regulation, the risk is overreach because the way the markets work today, the way access works today is through a computer. You don't go through the phone to talk to the broker who sit/stands outside of the ring, who then flashes an order to a guy standing with his back to the ring who turns around and whispers to the person who executes the order. That day is gone.

It's not here anymore. So how do you look at whether we want to vilify algo or not is a political question. So put that political question aside and focus on what is the issue as it relates to access to markets with a computer screen? Is there really an issue? That really should be the question and that should be something that I think everybody, you know, has a stake in because that's how markets are traded today.

And whether you're in energy, whether you're agriculture, whether you're in CDS, you can do it two ways on the phone or on a computer screen. And there's some concerns, obviously, people may have but to vilify the whole concept of a computer screen I think is misplaced.

MR. STANLEY: Yeah I don't think our

organization or anybody else vilifies the concept of computer access to the markets. I mean, computer access to everything is fundamental part of modern life. The question is are there forms of market manipulation that have been facilitated by this access and how should we regulate those specific forms of market manipulation?

MR. COYLE: I guess I would add a comment. You know, the electronic systems are really supposed to replicate what we had before but just more efficiently. I would say if you look at the number of orders you have today where you could have 30,000 contracts bid, you'd ask yourself is that really 30,000 contracts bid?

If somebody was standing in the pit and flashed a bid for 500 contracts and then, someone said sold and then you said I'll take 20 that would end immediately. I mean the person would be shunned so that would go away. That doesn't happen today, all right? So we don't know. We don't see that information but you have to -- it makes you wonder how reliable those bids and offers really are.

MR. NIXON: Okay, thank you, Tom. Angela, can we turn to you?

MS. TAYLOR: Thank you. I just wanted to add a little commentary to the discussion about Reg AT and I think that I would encourage the Commission to approach with caution the idea that you can legislate the risk-taking behavior of people who are making markets for the risk transfer. If you require people to put their market exposure out into the marketplace for some extended period of time, then what is likely to result is that there will be fewer people making wider markets and it could have a deleterious effect on the price discovery function and the availability of liquidity to the marketplace overall. So there's two sides to the equation.

MR. NIXON: Thanks, Kim. All right, Angela?

MS. PATEL: Thank you for having me here. Today I am going to talk about currency forwards. So the currency forward market is liquid and deep. It is one of the simpler markets in derivative space with most contracts averaging a 60 to 90-day lifespan.

The currency forward contracts are governed by ISDA documents between two parties and many buy side firms collateralize them under the terms of a CSA. This is also one of the OTC markets that has had a longstanding cash settlement service in place designed to mitigate settlement risk. Regulatory treatment of currency forwards in the US technically distinguishes between contracts that are cash settled or non-deliverable forwards and physically settled or deliverable forwards.

Because of this technical distinction, a couple of interesting things happened once the regulatory reform rules went into effect. First, deliverable currency forwards were exempted from many of the requirements of Dodd-Frank by Treasury while non-deliverable forwards remained subject to the full suite of rules including the potential clearing and trading mandates.

This created an unnecessary regulatory distinction between the two as they are practically indistinguishable as a portfolio risk management tool. Non-deliverable forwards have a feature that requires net settlement of the contract while deliverable forwards can settle both legs of the swap. In practice, however, many participants generally will offset all of their exposure for a value date by broker currency pair to make one net wire movement.

So while the technical distinction exists, it is not a practical one as both types of forwards behave the same from a settlement perspective for a large percentage of market participants.

Two, in a footnote found in the core principles, matters were complicated with the requirement that a facility which operates in a manner that meets the SEF definition, i.e. A trading platform that provides all-to-all capability, it must register as a SEF as of October 2013. This had the presumably unintended consequence of then requiring asset managers to evaluate and sign up with SEFs if they wanted to continue to execute their NDF book electronically on such a platform.

Although electronic execution had not been prevalent, only about 5 to 10 percent of NDFs were executed electronically pre-October 2013, this change underscored two things. One, the rule books that were there were problematic to the point that many asset managers, including Putnam, who had previously executed electronically, chose to move to voice trading for NDF trading. And two, the technology was, and in many cases, still remains SEF-like. With dealers streaming quotes into a system that cannot interpolate the curves properly or orders being set electronically, then picked up by a person, walked over to another part of the desk, manually priced, walked back and reentered manually.

Clearly the market wasn't ready. In fact, two and a half years later, the 5 to 10 percent number hasn't changed much. While not broken to the point of dysfunction, a once liquid and robust part of the derivative market now uses less efficient execution methods for one of the most volume-oriented trading instruments.

All of this was done to help make the system safer. In the long run, that may be the right outcome once the financial markets have had enough time to adjust to the finalized regulatory requirements. But the totality of regulation isn't finalized. I would caution that forcing regulatory change doesn't always end up with immediate safety benefits. This is akin to trying to repair a car while it is traveling on the road.

Now I will turn to the five questions posed. How are market participants accessing this market? From non-deliverable forwards participants are accessing the market electronically or via voice depending on a firm's level of comfort with the technology and rule book. Although there is no trading or clearing mandate, trading on a SEF is required to execute an NDF electronically. Likewise because clearing is not yet mandated, there is no real need for an introducing broker or clearing firm. There are no pre-trade credit checks on the NDF SEFs and all trades still remain governed by the existing ISDA documents.

And they are settled bilaterally. If an account can establish an ISDA with their FX bank counterparty, they can access the market.

Two, how have the ways in which market participants access the market changed? Some firms have elected to remain voice only even with the rule book changes.

Three, how what are benefits and drawbacks of the current means of access? The market remains liquid and deep but with different capital requirements coming into effect over the coming months, there are expected to be some changes to the overall liquidity at the dealers. There are no unusual barriers to access in this market.

Four, are there any recommendations on how the Commission could enhance market participants' access to markets? If non-deliverable forwards were not treated as SEFs more participants may trade them. Some counterparts that previously traded these with buy side firms have limited their trading as they now count toward the swap dealer limits. We have experienced firms who have cut back on their ability to trade NDFs with us such that they are only trading deliverable forwards and we have had to look for execution partners elsewhere.

Five, do market participants see any inherent risks in this market that the Commission should address? Again, this particular market is not in need of enhancement by the Commission and the inherent risks it faces are no different from those faced in other markets. I would argue that it needs less attention not more.

The currency forward market is one of the most straightforward, pardon the pun, markets in the OTC derivative space but its bifurcated inclusion in the regulations has created a situation that could increase risk and will increase costs for the final investor. Further, the lack of consistency regarding NDFs between the European and US regulations is relevant here as well. The lack of a crisp and harmonized definition of spots versus forwards has created a list of pending questions about margin requirements and calculation of material swap exposure, application of cross border requirements, scope of the ISDA state protocol adherence among other things.

The issue with the definition and application of the securities conversion transactions remain. The CFTC should clarify the application of this term which is contained in just the preamble of the final swaps definition rule and the EU should adopt the same policy so that any FX transactions that are intended to settle with the underlying transactions should be treated as spot even if they settle later than T plus two.

Finally, to be very clear, we are in favor of ensuring appropriate regulation and risk mitigation for financial markets. The impact of regulation on the markets is ideally meant to increase transparency and safety while not compromising liquidity. In the short run that ideal is not being met in the FX market. The regulatory uncertainty creates inertia in the technological and functional evolution of the market.

The non-cleared swap margin rules that will begin to come into effect in September of this year will ultimately create a cost that will be borne by the investor. This far outweighs the benefit in the short run. While we remain in favor of increased transparency into areas of the market that were opaque, focus on a mature segment of the market that already has procedures in place to mitigate risk and promote stability seems counterintuitive and counterproductive to the task at hand. Thank you.

MR. NIXON: Thanks, Angela. Can I ask if there's any questions?

MR. JESKE: John, can I add one thing?

I think Angela made a great commentary in regards to FX but as it relates to any energy users that are cross border particularly to Canada, Commissioner Massad, I think I saw in the press an MOU being signed with some of the Canadian authorities. Thank you for that effort.

I would point out that a lot of firms have to manage the CAD versus US and as Angela noted, the concept of forward spot and swap FX is a bit muddled, to say the least, between the CFTC regime and the Canadian regs. So just as a point there. I know you mentioned Europe, completely concur with that but I think this is something facing firms that do business across the North American borders presently and is a pretty big concern, I think, for many.

MR. NIXON: Commissioners, any questions?

MR. KOELING: Thank you, Commissioners. I am here to represent the FAPGG which is a proprietary traders group and I would actually like to comment on a couple of things that Tom said a couple of minutes ago. And I also had a couple of questions for him.

I'm going to agree with quite a lot of the things that were said there. Proprietary trading firms are also in favor of fair and equal access to everyone, making sure that it is transparent, making sure that it's clear how you can access markets, what kind of ways there are to connect. I will totally agree as well things like spoofing and layering are bad things. I think the Commission has got rules out there for that. They shouldn't be there. We're in total agreement on that.

What market makers try to do, like ourselves as well, is make markets for the end users. And what is important for us is to make sure that we have a market that functions well as well. We are at the end of the day reliant on these markets to exist to make sure that we can actually execute our businesses as well. And we end up on the same side of that equation rather than on the opposite side of that spectrum.

With regards to what you said on floor trading, my particular firm, Optiver, is more related to options market making and the things that you quoted as showing a 500 bid and then, getting hit for a 20, that happens all the time in options trading. I actually think in the electronic markets hitting something on the screen will guarantee that execution which I think is a massive step forward as opposed to a step back.

I could also see that this 30,000 contract on the screen might look weird but actually hitting that bid would lead to an execution as opposed to what actually happened in the trading pit. So I would assume, I actually think that that is progress rather than a step back. I'm not sure if you think the same. And one other question I had.

I was curious why you think it's important to actually know who traded what because I don't really understand how that is an important thing. Thank you.

MR. COYLE: The basic premise is that

the commercial participants, all right, buyers and sells physical commodity, are a smaller percentage of the market today than they once were. That's just part of the new environment. That's fine but it's difficult to respond to that if you don't know who's actually moving the market, all right?

Historically, you would have a sense that there's obviously some commercial activity going on. You see the market move. People can adjust.

Today the trading and the financial participants dwarfs the actual commercial trade. And so it requires you to trade less, right? And makes it more difficult, I think, to develop a strategy where you can identify what is the risk reward of that position you put on? We just see a lot of those.

I say random where you'll see nothing happen in the cash market and somehow the market moved 30 cents. I saw last week the bean spread moved 30 cents. As far as I can tell not much happened but that was a significant move. So these things happen, all right?

Recognize that there's new participants and the market adapts to it so we don't have an argument with that. But having more information isn't going to hurt anyone. We would have a better idea how to respond and how to position for that.

MR. NIXON: On that note since it's 11:45, Tim, do you want to?

CHAIRMAN MASSAD: Yeah, let me just say a couple of words. First just thanks to everyone. It was a very, very good discussion. It was a lot of very useful input. I think it's quite interesting just to hear the different perspectives.

The markets, each of these markets is a little bit different and plus having people who had different perspectives on what is even going on within in a single market was very useful. So I'm not going to even attempt to draw any conclusions other than to say I think it gave us a lot to think about.

You know, I guess the only things I would note similar to what I said at the outset is a discussion like this is incredibly useful. It is also, though, important to try to make our analysis of these things data driven. And I'm sure we'll be continuing to do that and looking to all of you for your input as we do that.

I think it's also always important to remember where we came from. We did come from a crisis that was incredibly damaging to this country in which in the fall of 2008 there was no liquidity and a lot of these regulations weren't in place then. So we do have to remember what, in fact, is motivating a lot of things we're doing and perhaps liquidity was underpriced previously.

I also just want to make a couple of comments on Regulation AT. I appreciate the input we've received on that. I think there are sometimes some misconceptions about what we're trying to do there. Obviously we can't turn the clock back on the extent of electronic trading or automated trading in our markets. Our focus, though, is really on the risk of disruption, the risk that an untested algorithm or an errant algorithm or something could cause a major disruption in our markets.

And in that sense, it's, I think, complementary to what we're also trying to do on cyber. And when we're here talking about liquidity and the risks to liquidity, to me the risk of a technological failure, an operational failure, a cyber failure are some of the most serious risks to liquidity that we face today. And our rule is designed to require reasonable risk controls, frankly, the same sorts of risk controls that I think various groups like FIA PTG and others have said are best practices.

And we're trying not to be prescriptive about that. We weren't prescriptive and they don't -- they're addressing the operational risk. We're certainly not dictating how long people have to keep a bid open or anything like that.

And I guess the final thing I will say is I think there are some very, very good questions as Jerry and others raised about the scope of who should be subject to those controls. That's a challenging issue. We had another meeting of the Technology Advisory Committee where we had a lot of participants, a lot of whom are electronic traders saying well, you made the scope too narrow actually. They wanted it even broader because they are more concerned about the risks that small participants pose than big ones.

So there's a challenge for us in terms of trying to strike the right balance there. I appreciate the difficulties of that and the risk that we don't want to overreach. We don't want to impose excessive costs on the market but we do, I think, need to address the risk that the high degree of automated trading in our markets poses today. Thank you.

MR. MILLER: I'd like to ask a question. Thank you, John. At the risk of following the Chairman's remarks, thank you. I want to go back to something that was said earlier by Mr. Mackey which resonated with something that I wanted to bring up. He suggested that there might be reason to have some relief from the swap data reporting requirements that are currently imposed particularly with respect to end users.

And that resonates with something that is a concern that I wanted to mention today. The part of the market that I'm familiar with is the life insurance industry and they are very large directional hedgers. And they execute complicated hedges in a programmatic way that often takes days in order to execute. And the fact that they have to be reported episodically after the execution results in an illiquidity in the market and a gapping of prices.

So though you know what you're going to do almost like a block trade, similar to a block trade, but it's not, you end up losing the market. The market moves away from you because they can see what you're executing.

And it's additional cost to the industry doing these trades and they're not speculative trades. They're really integral to the risk management of the portfolio. And I'm wondering whether there's a way of exploring some means of getting some relief so that you can get, if you come in with a block, with what is essentially similar to a block, a program, and get some relief from having to report those immediately, you know, in the timeframe that's required to the swap data repository and that make the market more efficient.

MR. BERGER: Thanks. I also just wanted to provide a few comments on some of the conversation that went on mostly hearkening back to the discussion at the beginning around the rates and credit asset classes and I'll be quick since I know we might be past our time.

First of all, I think it is important, Marcus mentioned the Bank of England study, I think it is a very good study. Researchers at CLARIS have also independently validated the results of that study. And actually, that study only looks at data through the end of 2014 and I think the progress that's been made and the benefits to pricing liquidity only grew if you extend the data out through 2015 as well.

I think that's not to say that liquidity conditions are perfect in all circumstances but I think the challenges that exist with respect to liquidity conditions also create opportunities for innovation. And so one of the steps the Citadel Securities in its market-making interest rate swaps market-making business has made is to look at areas that liquidity provision can be improved. And three of the key areas that we believe we've differentiated ourselves in is one, providing firm prices. And the swaps market has had a legacy of purely operating on an indicative price basis.

The second is providing firm quotes in size. So we auto quote up to 700K of DV01. So I mean statements have been made that clients can't get even 250K of DV01 done and I just don't think that's true.

And the third is being reliable in volatile market conditions. So on days when non-farm payroll data is released or F1C minutes are released, we do see a lot of other liquidity providers widen bid ask or step away and those are the days we were see our hit ratios go up. So providing firm prices, being there in size and being there in volatile market conditions are innovations that liquidity providers can bring to the market and differentiate themselves with.

I think another innovation separated in the marketplace that we've talked about some today is whether central limit order book trading will take hold in the interest swap space. And I think the promise of that trading modality is that it allows all-to-all liquidity provision. So it removes dependency on the existing liquidity provider community.

I think there are certain barriers. I think there is a demand for it. There are certain barriers that continue to exist. I think average pricing was mentioned by Kristen and that's certainly a valid for certain types of asset managers who have to allocate to multiple accounts. I think it's false to post-trade name give up a red herring.

We had, I think this group met just about a year ago and there was a broad cross-section of market participants from basically every corner who agreed that it's a practice that is overdue in terms of needing to be gotten rid of. And MFA, a major buy side trade association, put out quite a detailed white paper arguing why it's detrimental for the marketplace.

So there is promise to CLOB trading but there are material barriers that I think still need to be addressed to solve that issue.

Finally, I think the biggest barrier that I would see is to market access is the economics of clearing and that's one that I think a lot of people have already identified and thank the Commission for being an advocate on that fact and we're glad to see that I guess there's a new consultation out of Basel III to look at how the supplementary leverage ratio works.

So hopefully there is some promise there in resolving that issue. Thank you.

MR. NIXON: Rana? We'll take one more question.

MS. YARED: Thanks, John. I just want to add to Richard's comments and note that in the energy market you actually have a similar phenomenon where power and gas providers, so the real operators not like traders, do also tranche their hedging exposure. And so the same phenomenon that you reported in the life insurance market which is highly directional is also seen in the power and gas market not only here in the US but actually more acutely in Europe where the end user power and gas provider are themselves their own hedger and trader. So I just wanted to add that there's another market that suffers from the same type of phenomenon that you described.

MR. NIXON: Okay. Let me just take this opportunity, again, to thank all of you for participating today particularly the speakers that took the time to put together their thoughts. We're going to bring this part of the panel to a close and start off I guess pretty soon on panel number two.

If I could end with one remark, I would say that, and Chairman Massad said this, that the CFTC like all regulators have a very difficult role of balancing safety with market efficiency. And it's not always easy to come up with rules that are going to make all of the market participants happy. And as a matter of fact, every rule is going to have an unintended consequence to some market participant.

I would say, though, that all of our end users in the marketplace need efficient marketplace in order for them to transact and I think it is a benefit to the American economy or the global economy to have markets that people can access and trade on. And I think that obviously regulators need to be very careful that the ruleset that is put in place does not smother the opportunity for this efficiency in the marketplace and while safety is important I think the efficiency of how markets operate is probably paramount to all of us that are in this economy.

So thank you very much to all of you and, Sharon, thank you very much to you for organizing this today.

MS. WALKER: At this time in keeping with the main agenda, I would like to thank John Nixon for facilitating the discussion during our first panel. The MRAC will take a 10-minute break. We'll resume again at 12:05.

(Recess)

MS. WALKER: It is my pleasure to call this meeting back to order.

COMMISSIONER BOWEN: Let's get seated, everyone.

MS. WALKER: Okay. As noted in today's agenda, our second panel discussion will cover how is the market using portfolio compression today. I would like to note that we have members of our staff here on hand to answer questions and clarify current law and practice. Our Chief Economist, Sayee Srinivasan, and Deputy Director of the Division of Market Oversight, Mr. Daniel Bucsa.

I would also like to introduce Mr. Ed

Pla, Managing Director, Head of Clearing Execution at UBS Investment Bank and our representative of the Futures Industry Association who will facilitate and help shape the discussions during the second panel.

MR. PLA: Thank you. I'd like to open with a few thank yous on behalf of the panel and the committee. Thank you to Chairman Massad and Commissioner Giancarlo for your keen interest in the topics covered by the Market Risk Advisory Committee. To Commissioner Bowen, for your enthusiastic sponsorship of the MRAC and to Petal for your thorough and efficient management of all the logistics that it requires to do these.

Second, just a few housekeeping announcements, maybe to repeat some of the things John said. If you would like to speak, please press the button to activate your microphone. Importantly, please turn it off when you're done. Apparently, that's leading to some of the feedback. And if you could like to speak, please tilt your name card on its side and jump up and down if I don't see you.

Third, I'd just like to thank the panel for their time, the thoughtful preparation that went into this. There are some PowerPoint slides that we'll be referring to throughout the conversation. I think we recognize this is somewhat of a technical service and so forth, a subset of what happens in the market and we thought it was important to have some data to point to.

The panelists include Lucio Biase, CEO and Founder and LMRKTS, Claire Lobo, Global Head of Business Development at Markit Trade Processing, Dennis McLaughlin, Group Chief Risk Officer at LCH Clearnet, Michael Modlock, Head of Trireduce North America at TriOptima, and Kim Taylor, President Global Operations, Technology and Risk at the CME Group.

We thought it would be -- we have seven questions that we'll go through. We've got a number of speakers lined up for each. We'll pause at the end of question just to see if there are questions and comments from the audience before we move on to number two. We thought we'd start with number one which is what is portfolio compression, and, Claire, could you maybe get us started on that general question?

MS. LOBO: Thank you very much and thank you, Chairman and Commissioners for the opportunity to be here. And thank you, Ed, for all your effort in getting us organized and into this panel and all the good work from the other members of the team.

So the first question we're trying to answer for you is what is compression and also is it the same thing as netting? Michael, if you could take us to slide number two? That will do it.

And just to remind you, we're going to go slide --

MR. PLA: I think you need to speak up.

MS. LOBO: Oh, sorry. Is that any better? Yeah, that sounds better. Michael, just to remind you, we're going to start on two, we're going to go four and then, to three.

So it's important when just before we even say anything about compression to understand that the goal of compression and netting is to reduce risk overall in the market. So we're going to spend a lot of time talking about risk reduction and why that's good and the various ways that people achieve that.

It is the process, if you're at all a gardener, is it the season where you're supposed to be out there doing those things. It's the process of pruning trades from a portfolio in order to mitigate these risks. Netting, one of the questions is what is netting? Is it different than compression?

Netting is most commonly thought of as a type of compressing trades where you offset equally in a risk-free manner trades that you might have either cleared or uncleared. Compression comes in many, many forms and we're going to go through some of those. And we're going to look at slide four to just go through what compression is.

So we're going to start with the benefits of compression. So there -- compression is really a way of, if we could just pop all the bubbles up there, of managing all these different types of risks. So one very important one is capital usage.

So the way that Basel III is being implemented imposes leverage ratios on banks that look at gross notional. This has been a very large driver of compression in order to offset trades that over the years have piled up, may not be representing open positions anymore. They've been closed off with each other but by reducing those overall number of trades, thereby reducing gross notional, you can reduce your leverage ratio and get a more favorable capital charge against those trades.

Next and really, really important is margin management. This is true especially as the non-cleared margin rules are ramping up. In September we've seen a lot of aggressive compression and netting around these margin rules that are coming in and we expect to see more and more as we near to September and as that phasing goes on and on.

Also very, very important especially on the buy side is counterparty risk. Managing your credit lines with your clearing brokers as well as with your counterparties has always been something that's been used by the buy side as well as the sell side, swap dealers in the market for really -- back since I've been in the market since 2003, 2004.

Operational risk is very, very important as well. We saw in the Lehman default there were about 120,000, 125,000 trades or more that needed to be collapsed. Today, people have very actively managed to get that number of trades lower so that in a default scenario and also in just for making payments and settlement, that process is streamlined and it's much easier to manage the overall book of trades.

Regulatory compliance, the CFTC rules

require swap dealers to establish and implement written portfolio compression policies to offset bilaterally and multilaterally compress uncleared trades between its customers and it also encourages compression and netting of trades whether they're cleared or not.

And then, the big one is to lower costs in this market. Having fewer trades on the book, having less gross notional, having less counterparty risk, all mitigate costs and engage the market and more efficiencies. If we can go to three?

So here we're going to talk about the different types of compression that we have and netting that we have in the marketplace. Bilateral tear up of trades have been going on since I've been in this market back into the nineties. It's very, very typical and it's still very, very useful especially in the uncleared space. It's actually used across all markets, FX, credits, rates primarily. And also in commodities but I'm not an expert there so I'll leave that some of my teammates to discuss.

Trade collapsing within clearing houses, this really took off in around 2009 and just to demonstrate the extent of this, LCH published their compression data on their Web site. It shows that as of March 31 of this year there were 2.267 million trades that were actively open in the clearing house. It also shows that the number could have been as high as 8.137 million if compression hadn't been used actively over the last really five years.

Further, you can find out from that Web site that in March 353,623 trades were cleared but the outstanding notional, sorry, the outstanding volume only increased by 26,069 trades. So you can understand just from looking at those metrics how much is really being compressed on a daily basis. That was all about collapsing trades within clearing houses.

Multilateral compression runs have been used extensively since 2003. TriOptima has a service called triReduce. It did its first run in

2003 and since then, it's compressed 768 trillion of notional from these markets. And Michael can tell us more about that in just a minute.

Compaction is the last major type of compression that's being actively used. And this is a process where entire portfolios are optioned in order to relieve that original counterparty of that portfolio. And this happens in the cleared and in the uncleared space.

ISDA reported in their research note in July of 2015 that compaction could be accounting for as much as six to seven percent of the SEF activity. I'm now to turn it over to Michael and Lucio who are going to walk us through what risk-free compression means and what risk-constrained compression means. Thank you.

MR. MODLOCK: Thank you, Claire, and also thanks again to the Commission for their continued encouragement in these diverse topics. So my name is Michael Modlock. The (inaudible) compression, risk reducing business in North America for TriOptima. What we'll cover just now is the differences between the various forms of compression. We've got three examples here.

Earlier on in the first panel, Rana had observed that some of the clients were gravitated towards executing swaps with particular cash flows. And I think one of the reasons could be that they're looking to find perfectly offsetting trades in a clearing house so they can be risk-free netted. And first example here we've got the blue trades are blue. Sorry, the paid trades are blue. The orange trades are received.

We've got an example where there's a pay and a receive at two percent. The pay is 100. The receive is 90. That pair would be eligible for risk-free netting compression in the clearing house. And the way that that would work is you would net those down and you've got a residual trade on the pay side of 10 million.

If we look at the next bucket, the five-year bucket, we've got a similar but not identical example. We've got 100 million pay trade at 1.7 percent and that's offset with three trades of 25 million each at different coupons. So the fundamental difference between the first and second example is that the cash flows match but the coupons and the notionals don't.

This would be an example of coupon blending which is offered by the CCPs, various methodologies and what you'd end up there with is a residual or a remnant trade with a different coupon. Next example is 1.6 percent of 25 million. Both of these approaches would fall under what we define as risk-free compression.

The third example is what we do at TriOptima which is multilateral risk-constrained compression. And in this example, we've got our familiar 100 million pay trade. It's at 1.5 percent. There's two trades that are offsetting it and you can see that they're done on different days so the 50 million received trade at 1.7 is on a one day. The next trade is on the following day, the payer, and the third received trade is done at 1.6 percent. So we've got different notionals, different cash flows, different coupons.

That example is not eligible for risk-free netting or coupon blending. So what you'd end up with there is the ability to remove all of those trades. And the way that that would work is that the participants would set what we refer to as tolerancies for market risk and credit risk and that enables the algorithm to compress trades with different but similar characteristics at the same time.

Lucio, if you want to add to that?

MR. BIASE: I really don't have much to add except while you spoke about various forms of compression, I'd like to maybe touch on the various goals. So in the examples that Michael went through, it's really to reduce gross notional and trade count. So operational risk, of course, is the goal of that is to lower the amount of trades you have and this touches upon Claire's point, maybe proactively before crisis so it's a manageable number of trades and you're assessing the risk and the impact of the parties' failure.

As the incentive and how leverage was charged was based on approximations based on the gross notional of trades. The offerings would focus on reducing gross notional. But that wouldn't do so much to limit counterparty exposure, risk or the impact of the party's failure. And I think that may bring us to the next topic.

MR. PLA: Thank you. Kim, I wonder if you could touch on your definition or shed some light on the notion of risk mitigation and how you see it as being different from compression?

MS. TAYLOR: Certainly. Claire mentioned compaction and that is the term that is frequently used for this type of compression. Risk mitigation is another word for it and what happens here, what tends to happen here is that a party who has a package of trade exposures in a selection of different trades will go to the market and look for someone to trade an offsetting package of trades.

So they're looking to create the

directly offsetting trades that can be netted and then, a set of replacement trades that would tend to be smaller, a smaller number of trades to put -- to kind of reinstate the exposure. And perhaps that additional new trades are somewhat different in exposure from what the original package was.

So this is a package that is put out to the marketplace and in an auction type of format. It's a trade for the package. And then, I think one of the other features that is different about compaction that it's important to note versus the other types of compression that we have been talking about is generally speaking the risk-free and risk-constrained compression mechanisms, everyone who participates in the process ends up with a risk-reducing outcome.

Risk, you know, neutral or risk-reducing outcome with this compaction type of transaction that goes to the market as a package, it could be an entirely new set of trade exposures for the counterparty to the original portfolio. So it is different in a couple of ways. One way is that it involves soliciting current market prices so it is -- we consider it a trade that is -- has a market impact or a price discovery element to the transaction. And it also a trade that is not necessarily or package of trades that is not necessarily risk reducing for all the participants in the process.

So that is a definition for you of market compaction and drawing some of the distinctions.

MR. PLA: Thank you, Kim. Lucio?

MR. BIASE: Yes. I view risk mitigation, I understand compaction, bidless but I view risk mitigation as a somewhat larger application of portfolio compression. There was a slide earlier where it was kind of put on top of the pyramid. I don't view it as so much as a separate but a crucial part.

It perhaps the most crucial way to mitigate the impact of one's failure on others. And let me try to relate the forms of compression. So compression in its various forms should be done periodically and proactively to promote liquidity, promote better price discovery because people have more capacity to trade with others, but most importantly, ahead of a failure to limit contagion, lower the severity and probability of maybe another bailout.

Traditional compression, line-item termination makes the failure more administratively easy to measure after it happens but it does nothing to lower the exposure or impact of that party's failure. Gross notional, which isn't so separate, and again the question was how is risk mitigation different or is it different from compression?

Gross notional reduction was geared towards leverage when leverage was used as the best base or approximation of -- gross notional was used as an approximation of actual exposures. But the pendulum is swinging and leverage-based calculations are moving more towards risk based which is more in sync with, I think, the goals of everyone around this table especially when you're onto the standardized approach and modified SACR.

Risk mitigation, keep in mind that parties do not selectively default. If I had a portfolio with another bilateral party or even with a CCP, when I fail, I fail on all those positions. In the earlier slide, in the earlier question where Michael ran through risk-free compression, I'm trying to relate all three, you saw that it doesn't actually lower the exposure between parties but it lowers either the gross notional and there's a leverage incentive to do that, an economic incentive to do that, but it's not actually lowering the risk between parties.

And that's where risk mitigation, I think, complements and is really has its right spot on the top of that pyramid in terms of what the various forms of compression are. So in summary, fewer trades means less items to value in a default but lower exclosures means a smaller impact of a party's failure. Thank you.

MR. PLA: Thanks, Lucio. Any other questions or comments on question number one?

Okay. Dennis, I'm wondering if you could share your perspective on how widely market participants are currently using compression and risk mitigation services from your experience at LCH Clearnet.

MR. MCLAUGHLIN: Sure. Thanks for the invitation to be here. I think slide five really, if you could bring it to slide five, really sums up what's going on.

We see since the height around the June of two years, June 2014, we've seen that the compression has really reduced the amount of notional outstanding clearing houses. And this was from a BIS study. And it's driven, of course, by the fact that the regulatory capital is notional driven. And in this day and age, balance sheet capacity is an extremely scarce resource and banks have to be very, very careful about how they use it.

The way this works is as was explained the portfolio trays that a bank would have with the clearing house is going to be replaced by another portfolio with less notional but same cash flows. So cash flow matching is really critical here. So that means that the risk as far as the clearing house is concerned is the same.

Now to give you an idea of the extent of this on the ground, we started this really about two years ago in earnest, maybe slightly less than two years. And the notional outstanding at LCH went from 450 trillion to 250 trillion. That's almost a 50 percent reduction.

And accompanying that, the number of trades on the books fell by 40 percent. So and the idea is if we had a default then, the portfolios have been cleaned up to a great extent and we don't have all these superfluous trades lying around the place that we have to manage.

Now of course this activity continues on and on. It's a very, obviously it's kind of odd that some newspaper said we were having a decline in business when in actual fact, our business is going full steam. But they were just looking at the gross notional falling but, in fact, things couldn't be better in the sense that huge demand for this kind of activity.

The other thing I would say is this is CCP sees. But of course, it's not all trades in the market. It's the mandated trades. So there's other things going on here, cross-currency swaps, swaptions, all this kind of activity for which third party advisors are helping banks manage the risk in their portfolios down. And it's only the mandatory cleared trades that we see inside the clearing house.

So there's a lot more activity there and that creates a challenge for regulations is how do you -- you only have one piece of the puzzle so to speak. How do you get your arms around everything? Because the swaps staying in a repository will only give you a piece of it. But the extent of this is quite substantial.

MR. PLA: Claire, what data elements do you think we can use to try to gauge the extent of the use of these services?

MS. LOBO: I'll answer that in just one

minute but maybe I can help with what we see outside of the clearing house just to give people a flavor. In credit, where it's actually quite hard to find any public data, which I tried, I have to use our internal data and judging from the first three months of this year, about a third of the volume that we see is compression related. And that's compression and netting together.

The skew is slightly towards index and slightly towards trades that are already in the clearing house but we also see robust compression occurring in a bilateral space and the multilateral space outside of the clearing house in credit. In rates, is just as that the market would be 62 percent larger if compression was not used.

We see less bilateral compression than we do in the credit space but we see quite a lot of it. And that, I think, is largely because the compression within the cleared space is so very successful. It's successful and there are so many different ways to achieve the goals.

For things that are outside of clearing and rates, as Dennis noted, there are many new vendors that are spread across IDBs, third parties as well as the participants themselves that are coming up with many new initiatives, different ways to achieve compression in swaptions and cross currency but really in any product that there is. But the focus has been on the high capital type of product such as swaption and cross currencies. And we see aggressive compression coming from both the sell and the buy side around the rules that we expect in Basel.

In FX, we see different kinds of compression. We see presettlement compression happening with the G10 dealers through CLS and that compression, we believe, is compressing trades mostly in the space of possibly more than 75 percent of the volume before it even gets settled. In the FX space we also have Triana who offers a service for pre-give up trade aggregation.

So if a customer executes many trades in a currency pair, and I think it was Angela who mentioned this as well, as a customer executes many different trades, many different venues but is going to use a prime broker, they will actually aggregate those trades with the executing broker and give up one single trade to the prime broker in that currency pair. And we see Triana moving into the FX space as well for multilateral compression.

In terms of how these trades are identified, they are identified today by using the bulk event ID. If it is a compression event that is on a trade which is not a new, originating trade or if it's part of a coupon blending, typically the price forming flag will be ticked off. And if it's a compaction type of trade that has a third party that's involved in that risk pool, typically the price forming flag will be ticked on.

So between those two identifies, it is possible to observe the trades that are going through this process.

MR. PLA: Okay. Third topic question, for you, Lucio. Some of the service offerings obviously involve a tear-up of trades where the goal is to reduce gross notional. At the other end of the spectrum of complexity, the goal seems to be risk reduction or risk mitigation. How do those latter services differ from a low frequency dynamic hedging strategy that's also meant to manage risk?

MR. BIASE: Sure. The goal -- sorry. The goal is shared. The means are very similar but the efficiencies are very different. Initial margin, often called IM, is usually a measure of some of the counterparty exposure you have against a party. When I traded on the buy side 13 years ago, part of my job was to do these dynamic hedges. Maybe there wasn't a term for it yet but you would layer on trades to lower your exposures to banks, A) for the benefit of lowering your exposures to the various banks, and B) to reduce the real cost of initial margin.

Where I see this compression different

is that it's done by a third party. And it's done to a level of efficiency that the parties cannot do almost by definition, right? So if you have a third party with a holistic view of the exposures parties have to each other, right, and this third party should be independent. Then they are uniquely positioned to find a series of dynamic hedges to the parties' mutual benefit. Okay?

I don't want to dwell too much. I just want to go through, I guess, the main points there. And that is if it's coordinated by a third party it's a level of efficiency because if you're doing it on your own, you kind of have this myopic view of the market. And while you may request a trade to be novated or put on, novated between two other participants or put on, you have trade-specific hurdles that prevent this from really happening when a single party looks to dynamically hedge their book.

In the case of novations, you don't know the credit appetite between the two other parties. It may be in their mutual best interest. It may not be. But you're certainly going to get charged for that. Beyond that, you're crossing bid-asks and exposed to market risk as you're layering on these trades.

I think the fundamental difference here between compression, risk mitigation through the form of compression, and individual parties doing dynamic hedges is just the efficiency with which it can be achieved. And that's why to this day, even with the implementation of clearing and dynamic hedges, backloading, the amount of total counterparty exposure people have versus their market risk is still rather significant. And there's, I think, an opportunity and a need to lower that amount. In deference to time, I won't go deeper.

MR. PLA: Michael?

MR. MODLOCK: So just to follow on from that and first I'll answer the question specifically. So the way that I would interpret the dynamic hedging is that you've got parties going out and bilaterally executing trades on an iterative basis with the ambition to hedge market risk, basis risk.

I think if you compare that to a post-trade service, we operate an all or nothing approach with more than two participants. And the objective of that is to have a totally risk neutral result across all parties. So I would see that as one fundamental difference between the two.

If you enter into dynamic hedging, you are going to be adding or positively or negatively market risk. So I think if, to Lucio's point, you could look at that as a third party provider who's delivering a service that could reduce credit risk without increasing or decreasing market risk.

What I would also add is if we just maybe move to this example here. Compression risk in other measures, you know, we talked earlier about notional and line items and how that reduces risk overall. You get to a point where if you keep removing risk neutral pieces of the portfolio, you end up with more directional portfolio certainly on the bilateral netting set.

And what we're interested to look at over and above the reduction of notional and line items which, as we pointed out earlier reduces the capital cost and actually improves the leverage ratio for firms, we can also look at risk in other measures. So let's take, for example, the DV01 in interest rate swap. We've got a portfolio here with peaks and troughs and you can see that the blues offset the reds and it's actually red's simply market risk flat.

But from a counterparty exposure basis, you've got a series of extremes, positive and negative, counterparty exposure. And to Lucio's point, what are you are able to do with services that do not necessarily remove notional but do reduce risk is you can flatten out these peaks and troughs.

So you're market risk neutral to start with. You're market risk neutral at the end but what you've changed in your counterparty credit exposures. That can be done at a bilateral level.

It's more challenging at a more industry-wide level. You can certainly achieve that for cleared and uncleared exposures at the same time. If we think about the number of clearing venues that there are now compared to them in the crisis and the number of market participants that have got large exposures with each other, then this is an opportunity over and above the traditional compression as we've come to know it and as defined in the CFTC rules.

MR. BIASE: Yeah, I would like to piggyback off Michael's points. And maybe take a step back and just because we're using the words risk a few ways. And I think maybe the best way to look at it is your market risk is the impact of a movement in the market on your portfolio against a specific party that's your counterparty credit risk, okay?

Now to the extent that your compression can be seen as a complement to Volcker, so Volcker limits participants' ability to take market risk. But in and of itself it may not be sufficient to lower contagion because you still have this counterparty exposure that exceeds the net market risk. And we call it redundant risk but you can look at it as excess or systemic risk and that's what this dynamic hedging or risk mitigation services reduce.

So you get the total counterparty exposure down to the net market risk. And that's a necessary complement, in my humble opinion, to Volcker and that form of reform.

MS. TAYLOR: If I could just add somewhat of a clearinghouse perspective to this part of the discussion? When clearinghouses accept transactions there are some regulatory requirements, actually, and then, some good risk management practice requirements as well that require clearinghouses to put some sort of credit screen or limit on the change in exposure that comes from a certain transaction.

So with these compression measures that are changing the counterparty credit risk mix, if the clearinghouses are one of those counterparties, although I wouldn't say that these trades have a market impact, they would have a credit risk impact and would need to be -- clearinghouses would need to be allowed to have risk controls or filters on these type of changes in the counterparty risk behavior of their clearing members.

So that's another kind of layer of distinction in the types of transactions and the types of market treatment that should be applied to them.

MR. MODLOCK: And if I could just add to that, I think that's a good point from Kim. One of the things that is going to change this year for us at least is the ability to extend compression services beyond the traditional sell side dealer community and be able to involve the FCMs, CCPs and see end users, at least the buy side, who have got a relatively balanced portfolio that would be eligible for compression on a multilateral basis and be able to work with a broader industry community. Naturally the FCMs and the CCPs would have some kind of governance around the amount of risk that could be changed. And certainly that's something we expect to happen this summer.

MR. PLA: Rana?

MS. YARED: Thank you, Ed. I just want to add the dealer's perspective to it. We've heard on a couple of occasions that one of the reasons why we spend time talking about compression as an industry is because it lets these fine folks peddle their wares.

But this -- oh. I don't I'm ever accused of being quiet. So here we go. But the compression tools are actually incredibly important from the dealer point of view. And I just want to distinguish a little bit what's being said.

So I would just set dynamic hedging aside because for me that's a trade event. So at the point of trade, one decides that I wish to hedge my risk in the following way and then, you do that in a programmatic fashion.

It's price formative by definition. Everything that we think about as true compression, again, I'd set compaction aside, is by definition not price forming and is also by definition a post-trade event. And it really falls into three buckets in the dealer's mind and I can't emphasize enough, like, how important these three things are.

So one is gross notional reduction which has been, I think, elaborated on extensively. The second is exposure reductions. So to give a very kind of concrete response to this. One of the things that obviously weighs on our mind very deeply is CCAR. And one of the items in CCAR that weighs on our mind, specifically, is the concept of large counterparty exposure. And as I think, Lucio had said there can be a difference between one's exposure and one's true market risk.

And of course, we're all benefitted by bringing the two as close together as possible. Well, one of the methods that one or more of these individuals have suggested to us is a method whereby we would, with our other dealer counterparts, submit our trades for a particular product into a central service that's run by a third party. And that third party would come back and tell us, I'm going to use Morgan Stanley because they're right across from me, Goldman and Morgan Stanley, you need to put on the following that collectively would reduce your gross exposure to some other folks around the table.

Today that is an increase of trade. It's a new trade. So therefore it's notional increasing and we're not sure, based on the guidance that we've received from your good selves, that that trade actually falls inside of the no action relief guidance because it's a new trade. And because it's not gross notional reducing.

But as is very clear, it is definitely exposure reducing which is beneficial for systemic risk. I hope that's an uncontroversial statement.

The second type as it really relates to initial margin is what I would call delta reduction. So again same as just like exposure to a particular counterpart. It might be the case, as I think Michael's slide shows really nicely, that the portfolio in total could actually be quite risk neutral. But to a particular counterparty could not be and by getting many counterparties to work together through a third party, you get the benefit of triangulation and an opportunity to reduce excess market risk as close down to true market risk as possible, which in the unfortunate and hopefully not coming event of a default allows for systemic risk reduction.

Again, one method which one might do this might be to add a trade which we are concerned doesn't under the no action relief. So the specific ask from the trading side of the house would be to look at the no action relief letter that you kindly issued us in 2013 which was very helpful to us and see if there's an opportunity within very constrained parameters such as non-prize forming service provided by a third party which means that like if the concern is that the counterparties might game if it if they work with one another, it's you can't game it through a third party. And then, you know, report it as such back to you guys.

If there can be a way to expand that no action relief to allow us to ultimately achieve the goal of systemic risk reduction.

MR. PLA: Thank you. Stephen?

MR. BERGER: Thank you. I just wanted to also chime in with a buy side market participant's view of what we do in the marketplace today with respect to portfolio compression in our funds. And I'm going to talk specifically about cleared interest rate swaps.

I think as Michael just noted, to date the multilateral compression facility provided by TriOptima has not been available for buy side market participants clearing through an FCM. So that's -- when it is that may be something that buy side participants look at. But to date, the most common form of most common way to do portfolio compression is, I think Kim alluded to, you go into the marketplace to execute what's called an offset or unlined package.

So if you have 50 line items on your books that you want to compress, you go find somebody that will take the other side of those 50 line items so you then have 150 completely offset the other 50 and then, through your FCM you can take those to the CCP and get those extinguished and you're left with a handful of line items that were part of that offset package that have roughly the same risk exposure as the 50 that you were obtaining to compress.

That activity two years ago was entirely done by spreadsheet. So you'd say -- you get a spreadsheet of the 50 line items you wanted to compress. You'd send that out to a dealer or two to get priced up and they'd come back to you with their suggestion of that. Today that process is almost entirely done, at least for us, on SEF even though those offset packages have no MAT components. So it's an instance where people are voluntarily using SEFs for the kind of STP and workload benefits they provide.

And I mean, I think trueEX was a well-known pioneer in that space with their PTC tool but Bloomberg and Tradeweb now have basically the same types of functionality. So I think a lot of clients are now using SEFs to do their offset packages. And I think the goals are, again, as others have noted, line item and gross notional reductions.

So anyway that's basically kind of how it's working for now from a buy side perspective.

MR. PLA: Marcus?

MR. STANLEY: Thank you. So this is obviously a complex area and we're happy to learn more about it. I have to say at this point we see a pretty big difference between the gross notional reducing form of compression, what was called the risk-free compression and the risk mitigation or risk-constrained compression.

And the reason is that in terms of risk-free compression or gross notional reduction it seems like you're looking at two per --

essentially two trades that are identical except they are in offsetting directions. And if you can just get the counterparty risk out of there you have essentially eliminated the risk in an objective way.

The problem to us with looking at these risk mitigating or exposure reducing trades in the same way is that these regulatory exposure metrics are basically, they're basically risk adjustments for capital. If there's one thing we learned in the crisis, it's that risk-weighted capital is a dangerous concept because it involves a whole lot of assumptions about how things are going to behave in a crisis. It's very model dependent.

And if you look at the SACR that is going to be the measure of potential future exposure that Basel is pressing for, you see a lot of assumptions there both in terms of the netting recognized within a netting set which, right now, could look one way. But at a future moment could look quite different because you might have very different instruments within the netting set.

And you also see a lot of assumptions about correlations within a hedging set. And those correlations could also go wrong in the future.

So obviously in the background of this whole discussion is are we going to grant regulatory exemptions and I don't think there's any question that when regulators put those exposure metrics out there, people are going to try to rearrange their trades to reduce their exposures according to those metrics. I mean, that is going to happen and it can't really be stopped. But as that happens, it may well be that people will find areas of risk, ways to do risky trades where the risks are not reflected within those models and within those exposure metrics.

That's exactly what happened prior to the crisis. People found the weak points in the risk adjustments for capital and they went there and they pushed a lot of volume in there.

And I think that if we want our market regulation system to sort of a separate protection and a separate check that's different from just our capital exposure metrics, our risk adjustments in capital, we have to be careful about granting too many exposures, sorry, too many exemptions to sort of this model-based exposure reduction.

I think that there are dangers there. Although and one final point I would make is that we are going to have a lot of consulting organizations and a lot of third parties offering to try to help people in various ways reduce their capital exposure. And that's fine and that's great. They're going to give advice.

To the degree that we privilege a few of these third parties by giving them special exemptions in this area, there could be some competitive issues in terms of how that advice is provided. So just once again, bottom line to us, the risk-free compression, the notional reduction compression, it's not model dependent. It seems like the model dependent risk mitigation kinds of changes in trade seem to present some quite different issues to us.

MR. PLA: Good. A number of things that were said are probably a good segue to question number four.

Kim, how do you distinguish, when you think about risk mitigation, to the extent that there is or is not price discovery taking place, could risk mitigations services in the limit be considered order book trading? How are they different?

MS. TAYLOR: Yes. I think one of the distinctions that we have been trying to make and based on your comments, I think we haven't maybe succeeded in making that distinction clear, is that we're actually suggesting that compression, the definition of compression include the types of features that Rana was talking about. Where it is provided by a third party, where it is not price formative or it's not part of the price discovery function so there's not a trade.

All of these compression services, whether they are riskless or risk constrained that we've been talking about actually do reduce notional exposure, transactionally are eliminated and the distinction is basically that you get a broader set of trades that you can work with to execute that risk reduction than you would get if you only did risk-free compression. So where we see a distinction between something being a trade and being a product of a compression activity is that it is basically done at a stale price. There's not a new pricing element to the transaction.

It actually does reduce open line items or notional exposure and it can do that within kind of a bilateral or unilateral universe or it can do that across a multilateral set of counterparties in some type of a third party service. And I represent a company that provides a clearinghouse. And as a clearinghouse, we can actually be a provider of a compression service or we can actually be someone who takes in the end product of a compression service that happens at another third party.

And as long as those are risk-neutral or risk-reducing activities for both sides of the equation, we would consider those to be defined as compression transactions and we would consider them not to be order book transactions.

If they are brought to the market, even if because of the circumstances that the gentleman from Citadel was laying out because the kind of broader compression services aren't readily available to all elements of the marketplace as yet. If there are trades executed with a price discovery function in order to accomplish the activity, then we would consider those to be order book transactions or transactions that would be trades and the services used to execute those trades to be some type of an order book transaction.

MR. PLA: Michael?

MR. MODLOCK: Yeah, I have a couple of thoughts on this. So from a service provider perspective, we are regulated and as members of the NFA, we operate within the CFTC rules obviously as do our clients.

When we think about the rules that are attributed to SEFs, DCOs, DCMs, for example, we don't provide a platform that bids and offers a meeting. The services that we offer are not real time. They're not continuous. It's not an all-to-all market where we're operating with subsets of the industry here.

So I think they're all good examples of why we wouldn't need to be certainly registered as SEF. In fact, the core principles back in June 2013 had said that multilateral portfolio compression exercises are not viewed as involving the execution or trading of swaps. Rather they are viewed as netting mechanism and do not require compression service providers to register as SEFs.

So I think the rules and the logic and the common sense would support that. If we go back to the concept of the risk reduction through other means not just notional and line items, if I was trying to reduce risk with you, I can only do that with the compression of execution of a new swap that rebalances the exposure that you and I have today. So it's no good me putting that out in the clear wants to trade that swap with me because that's not going to work for us in our relationship.

So there are already a very large number of conditions and tolerances that the market participants themselves dictate as part of using the service. In addition to that, when we work with clearinghouses and we're working with six of them now on the compression of cleared swaps, the clearinghouse needs to be absolutely cash flat per day so there's no change of risk at all for the CCP.

And the market participants set their tolerances which are predefined. So this is purely an analytical service.

MR. PLA: Kim, maybe a follow up for you. To the extent that these non-price discovery services that are taking place also take place on SEFs and DCMs and DCOs, what is the or is there a policy justification for allowing these services to take place in the realm of unregistered service providers?

MS. TAYLOR: I think for me I think the distinction comes back to is the activity that is being performed creating a trade as the market would define a trade and or not. And if it is, then I think it's a registered activity and would need to be performed by a registered provider. And if it's not a trade, then I think there is a lot of flexibility for that not to be required. And I mean, I represent a company that basically all we do is provide services through registered entities. It would be very handy for me to be self-serving about it and say that everything should be done for a registered entity but really these activities are -- the activities of compression are truly risk reducing.

They're risk reducing for the market participants. They're risk reducing, the way they're being provided now, they're risk reducing for clearinghouses. And they are risk reducing in a broader, systemic way. I think everyone would agree that the London Clearinghouse had a very successful default management exercise with the Lehman swap portfolio in 2008.

But if you look into the details of it, it was still successful but it took a lot of work by the street overall, over a period of several days maybe even a couple of weeks to do the operational part of managing the book of transactions. And now if it were to happen, another type of event similar to that, the size of the book that would be being brought to bear to the market and that everyone would have to react to and process, would be cut by at least half.

Actually, in terms of line items, it would probably be cut by significantly more than half. So I think it's a better, easier default management is a byproduct of good access to compression services. So we would be an advocate of compression services being able to be broadly available and actually even expanded beyond where they are provided now so that it would be able to include elements of the buy side for example.

MR. PLA: John?

MR. NIXON: What are your concerns about potential rules going forward that could be put in place that could impact the effectiveness of either compression or netting?

MS. TAYLOR: I think one of the concerns that we always have is that there will be regulation that increases the cost without a significantly corresponding decrease in risk.

So kind of unnecessary costs and one of the examples that I would put there, I think, would probably be over-engineering of the trade reporting requirements associated with transactions that are not actually trades in the general sense of the market. That would be one example.

I think another example would be doing things that would restrict the access to the -- by market participants to these risk-reducing services especially in the face of situations where the regulatory capital requirements are very punitive based on certain behaviors and these compression services allow the market participants to very transparently and safely reduce some of those exposures. And it's not just a model-based reduction.

It's not just a point in time let's look at the match and see if it works and the math might not work next time because the output of these processes is that transactions actually are extinguished and no longer exist. So I would see some of the same risks that you mentioned in your comments about kind of mathematical exercises that could be different over time. But these are not -- these compression services are not just mathematical exercises.

They're not just model-based exercises even if there's a model that somehow was used to create the output, the output is trades are extinguished and replaced with sometimes newer, fewer trades with a similar risk exposure.

MR. STANLEY: John, if I can just add another response --

MR. PLA: Please.

MR. STANLEY: -- to your question there.

Certainly one of the other challenges to continued efficiency and compression is the new rules for the bilateral margin. It was very good to hear Commissioner Giancarlo's comments earlier on supporting the idea that the compression of legacy swaps would not be treated as new swaps for the purpose of the new bilateral margin.

And it's also gratifying to hear that the Commission had considered this in their preamble that it would be open for discussion. I would also add that the Canadian regulator OSFI last year had actually put out final rules that said that the new swaps that came from the compression of grandfathered trades would not be treated as swaps for the purpose of the new margin rules.

So if I would bring in an example here of this, interdependencies, co-dependencies in the market that we see whether it's a buy side participant, sell side participant, a CCP, this connection between the participants, the FCMs, the members of the clearinghouses, the CCPs themselves and that potential contagion which ultimately we're all trying to address systemic risk.

So what tools do we need as an industry to be able to address the bilateral portfolios, the cleared portfolios, the needs of the buy side, the needs of the sell side? So I think the uncleared margin's certainly a challenge.

MR. PLA: So, Claire, we may have already covered some of question five in the previous discussion but I think this relates to information that related to compression services being included in the SDR. Were those data requirements from your perspective imposed burdens that could, in any way, hamper/hinder the progress of further compression in swaps?

MS. LOBO: Yeah, thank you. In the question in the draft of the technical specifications it's referenced in the question. The question in the draft asked whether there should be granularity with regard to the different types of compression that should be included on each trade that is compressed.

The comments that came back from ISDA and others including ourselves is that it would be an increased burden to be able to systemically across everybody that touches compression today label those trades appropriately. And I might also point out that there would have to be a ramp up if were to go towards something like that because there is no field today that's commonly used in the protocols that are out there.

FIX or FpML, that would be convenient to use so there would have to be something that would be added and that would have to happen across pretty much every market participant in order to properly report. Especially given that these trade compression activities come from SEFs, they come from bilateral instances, they come from within clearinghouses. They come from pretty much all over the place.

The other concern that was noted in the letters, the comment letters, was a concern that perhaps global regulation wouldn't be coordinated and the definition of these different types of compressions might overlap or conflict leaving people that are stuck in a multijurisdictional reporting regime to have to come up with multiple identifiers for just one type of trade that might be compressed in some certain way.

So those were some of the issues that have been reported. I would -- I've had a conversation subsequently with an ex-colleague of mine and friend, Katrina Bell, and she did point out that there had been a discussion with the FpML working group some years ago about using the field that exists today which is the bulk event ID and creating some sort of a scheme inside of that field that would be able to distinguish probably between to two main types of compression that we're really grappling with here which is ones that have a price-forming component and ones that do not.

And to be able to distinguish in that ID, that identifier, in some way that this trade was price forming or it was not price forming. And I think that that might be a low cost actually implementable solution that could be a global solution and it could get some traction.

MR. PLA: Thank you. Stephen?

MR. BERGER: Just want to chime in on this kind of the reporting angle to this. And I think there is a need to tailor the solution or the requirement based on what type of compression activity we're talking about.

So first of all, if you think about it from a part reporting perspective, i.e. what data is disseminated publicly, today the offset packages that buy side firms enter into are part of the information that's publicly disseminated though they're not identified as such, right? And so you can kind of back them out from the publicly reported data because you see a bunch of backdated swaps that all got executed at the same time and there's like 50 line items with a bunch of strange maturities and off-market rates like all happen at the same time.

So you can kind of back them out but it would be much more efficient if in the real-time public reporting of those offset or unwind packages there was a package flag. And I think that's something that is already being considered based on the most recent consultation about improvements to the data reporting.

I view that bucket of offset unwind packages separately from some of the other activities that are being discussed. So if a buy side participant has a portfolio of completely offsetting swaps that they take to the CCP and says extinguish these because I have these 10 that offset perfectly these 10, I don't see that as something that needs to be publicly reported in part 43. Obviously there will be an update that goes to the SDR that references the fact that those positions are no longer on the books.

Similarly if a buy side participant goes straight to a CCP and uses a coupon blending mechanism at the CCP, again, I don't think that's a publicly reportable event but obviously one where the records at the CCP and the SDR will be updated. And then, for the kind of inter-dealer multilateral compression exercises, again, I don't see those as publicly reportable events though the results of those would obviously be reflected in the updated registry at the CCP and by extension at the SDR.

So I think there's a distinction that can be made in terms of what reporting requirements need to be applicable to what types of portfolio compression exercises.

MR. PLA: Kim?

MS. TAYLOR: I think I would just add a general comment to the issue of the reporting requirements. The TR and SDR regime, it is very clear that regulatory objective is a very worthy regulatory objective.

Both ends, the real-time reporting and then, also the ability to have the warehouse of all the data that you will need to validate someone's exposure in times of crisis, that's what the TR/SDR element is supposed to be about. I think what has happened is that there's kind of a failure to apply the 80/20 rule.

And so in trying to pursue perfection in the type of data that is obtained and the way that it's obtained and the way that it's held in those TRs and SDRs, I think what has been at risk is that the data that you'll get, and I think we clearly are still as an industry having a struggle having the data that's in the TRs and SDRs be correct, kind of fully correct. Because it is very complex, very specific, very different across jurisdictions and I think what I fear will end up happening is that before we get it figured out and get it cleaned up, you'll have a need for the data and you will have data that you may think is incorrect that is not actually representative of the actual positions that the people have.

So I think I would suggest that in any of the work with respect to the TR and SDR in the reporting, to consider erring on the side of under-engineering versus over-engineering the exact specificity of every tiny little feature of every trade that happens in the marketplace with the goal of actually knowing the exposure that you're facing when you're trying to manage it.

MR. PLA: Dan?

MR. BUCSA: So just to simplify the question and to build on what Stephen was saying for the 45 reporting, not the public tape reporting, would LCH CME TriOptima market agree that the new swaps that are created, if there are any as part of whichever exercise is conducted, or the termination of the swaps that were compressed would be reported to the part 45 means for the SDR and for staff to know?

MS. TAYLOR: I would assume those trades would be reported but I think what I'm suggesting is that we not report with 17 different possible fields about how they were extinguished or how they were put on and just that it's -- keep it simpler and it's extinguished from a compression activity or it's a new trade resulting from a compression activity without 27 subfields that will be harder for people to comply in a way that will be useful to you.

MR. PLA: I think in the interest of

time, let's park that and maybe we can come back to it in the lightning round at the end.

Dennis, question six we've probably covered in some of the previous discussions but from your perspective, to what degree does portfolio compression either add or remove risk from the market?

MR. MCLAUGHLIN: Thank you. Well, we've heard that there are few kinds of portfolio compression. There's notional reduction which is clearly good. There is counterparty exposure reduction which is clearly good. And then, the third part was this IM reduction which is also clearly good.

So in none of those components is the risk going up. It's coming down in a controlled way. The other thing we heard about was the fact that compression is a very, very big activity. Somehow it's grown quite a lot and what's happened is the market is being controlled in terms instead of letting this growth get out of control, it's -- the garden has been weeded, so to speak. So there are now less line items and it becomes easier to manage a default because you have physically trades to move from one -- from a default in the CCP.

And you also can manage porting easier because obviously less clients, sorry, less capacity would be tune up in the actual reporting process. So I think it's a good thing.

The only thing you have to be careful of is that the operational component of all this is carefully controlled. So in other words, you're not caught in a limbo-like state of trades which should have been canceled, weren't quite canceled before the new trades were put on. But as long as that's taken care of I think it's a risk-reducing activity.

MR. PLA: I think in the interest of time and to stay within our time budget we'll do the last question as a lightning round. So if it's okay, I'll pose it to each panelist and they've have 60 seconds or less to add a final comment.

And the final question is in light of the discussion we've just had, are there any recommendations you can make to the Commission on actions they should take or they should refrain from taking regarding portfolio compression? And why don't we just go straight in a row starting with Dennis?

MR. MCLAUGHLIN: Well, I think that compression should be encourage at all costs because otherwise without it you just get a market which is growing and growing and growing and never really declining. So it should be encouraged, probably not mandated because it's up to individuals in the marketplace what they want to do. But certainly encouraged and not discouraged.

MR. PLA: Kim?

MS. TAYLOR: I sense there's going to be duplication in the lightning round. Given that the capital requirements are setup to really penalize the growth of exposure and given that there are systemic benefits to the reduction of line items and counterparty exposures, I think the

Commission should certainly not discourage compression and actually should act to encourage the broader use of these compression activities that really do extinguish trades and reduce exposures.

MR. PLA: Thank you. Michael?

MR. MODLOCK: I would say reiterate the relief for the partially terminated swaps and replacement swaps for the purpose of bilateral margin.

MS. LOBO: I would add that I think innovation needs to be cared for with regard to compression much like the discussion that's going on in the block chain world. There are a lot of new kinds of compression that are being thought about and some that are coming to market and I believe that that's a good thing.

I don't see that compression or netting really adds risk to the market. It does take it out as Kim has eloquently pointed out. And I would also add that with the issue of trying to identify the price-forming trades that maybe they're in the context of compaction that a thoughtful, and if I can say, low-budget solution is found so that it doesn't raise the bar in terms of meeting 43 or 45 reporting.

MR. PLA: Lucio?

MR. BIASE: I think you may already be doing some of what Claire is suggesting. I mean, we're a young firm and you've put us with some of these stalwarts. We've been focusing currently on reducing systemic risk. So I commend the Commission for not letting regulation itself stymie the goals of regulation and the safety and soundness.

More specifically and maybe to echo some points made by my colleagues here, is that this is really not a price discovery issue. It can be done in a controlled environment with total transparency to the regulators and it's not trade execution but a post-trade process that helps clean up whether it's gross notional or counterparty exposure. Thanks.

MR. PLA: Susan?

MS. O'FLYNN: Hi. I just wanted to kind of raise a point that I don't think's really been touched on today. You know Morgan Stanley is very supportive of portfolio compression and we are active users of a number of the third-party providers here both and including the clearinghouses. I think what needs to be recognized is the efficiency that exists in both CDS and IRS rent, netting and portfolio compression. And it kind of links back to Commissioner Giancarlo's original point around liquidity in some of these markets.

Now obviously these businesses now have to carry additional capital which is driving the need for these compression services. However, and it kind of links back to some of the points made in relation to bespoke trades that compression does not compress the entire notional of certain trades especially when they tend to be less standardized so that there is, and back to, I think, to addressing some of Marcus' points, institutions like dealers will have to carry more capital for trades which are more of a spoke.

That is just a fact. Now these portfolio compression services offer us some ability to create capital efficiency. To be able to recycle that efficiency back you need to offer business to our clients but I just want to make clear that these compression services work well. But when there's a degree of bespoke nature about certain trades, it's not 100 percent success rate. So I just wanted to leave everyone with that particular here because I think it's kind of been missed.

MR. PLA: One more comment in the lightning round. Anat?

MS. ADMATI: Well, I just want to echo --

MR. PLA: Sorry, two more.

MS. ADMATI: I want to echo what Susan just said that let's not forget there are new terms here, compression and it's all great because it compresses risk and we like that. And to the extent that it does and that you have to look at the whole portfolio to understand what a thing does, we definitely want that.

So this notion of splitting up everything two million pieces and looking at them separately doesn't make any sense in finance. But let's remember the other term that we became kind of we paid the price for which is called regulatory arbitrage which sometimes did add risk or did not eliminate or things that were thought to eliminate risk weren't doing this fully.

So I just warn that we don't rush into just saying anything that has a label of compression or whatever is definitely eliminates risks and it's gone and all of that because sometimes that's not true.

MR. PLA: Marcus?

MR. STANLEY: Just adding to what Anat said, she said most of what I wanted to say but I actually think this is complex because there's something here that you definitely want to preserve in terms of the ability to compress a multilateral portfolio that can't be done unless a group of people get together to do it. But as the same time you don't want sort of open the door wide to an unlimited ability to rejigger your portfolio outside of the CFTC ruleset as long as you're reducing any regulatory exposure metric even if it's highly modal and assumption based.

So where you're going to strike that, I think, is not a simple question.

MR. PLA: Chairman Massad?

CHAIRMAN MASSAD: Well, it's a very, very good discussion, very helpful. And I think on these last points in particular the lightning round was helpful. I might have, if we had time, would want to maybe get into the more -- the granularity of how exactly should we encourage or discourage and which types of compression.

Stepping back from that, we've got a rule right now that says swap dealers should have policies to periodically engage in compression. And for that purpose, we've defined it very, very broadly and we haven't said how often. We haven't said what types. We've just -- and I think that's appropriate -- we've left it very flexible and broad.

When it gets in, though, to exemptions from other requirements, I think that's where we do have to get more specific. And we have. Reference was made to the relief on clearing.

You know, in that case we said it had to be reduction in notional amount. It had to be market-risk flat. It had to be same maturity.

So I think it's -- this is a discussion we should have going forward. We should think about these different types. We should think about how it relates to requirements on trading, on clearing, on margin. But for example, on clearing, it kind of ends up being a question on legacy swaps, right? I mean, and once we're out of the legacy world, our clearing requirement won't matter to whether you engage in compression or not, I think.

To state it differently, had we said for our clearing mandate not only must you clear new swaps, you must put all the old swaps into clearing, you would not have needed an exemption from relief for us to do compression. So I'm just saying that I think we have to consider what we do. As we consider what we do, we have to really get into the particulars of this.

And we also, of course, when it comes to something like margin, have to also pay attention to another goal that many of you are very fond of which is regulatory harmonization because we have to work with the Fed and the bank regulators. So it was a very useful discussion. I look forward to continuing to engage on it.

MR. PLA: Petal, back to you.

MS. WALKER: Okay. At this time in keeping with the meeting agenda, I would like to thank Ed Pla for facilitating the discussion during our second panel. Commissioner Bowen will now make closing remarks.

COMMISSIONER BOWEN: Great discussion, again, everyone and I was going to do a few takeaways. So I think on the last topic, the lightning round, was pretty comprehensive although the one takeaway would be not all compression is created equal. That's my one takeaway on that.

I want to thank the Chairman and Commissioner Giancarlo for being here. I want to thank the members of MRAC, especially our facilitators, John and Ed, and our key speakers today.

Generally, I think the takeaway is that our markets are functioning pretty well but not as well as they could be for some of our small end users. We heard today that SEFs are really not used much or at all in the agriculture and energy spaces but that they place a significant role in the rates and credit markets.

And I think one of my biggest takeaways is that we need to continue to balance our regulatory mandate but to do so in a way that promotes efficient and innovative markets without undue burdens and cost.

And with that last thought, I want to thank you all again for attending today.

MS. WALKER: The meeting is now closed.

(Whereupon, at 1:28 p.m., the PROCEEDINGS were adjourned.)

* * * * *

CERTIFICATE OF NOTARY PUBLIC

DISTRICT OF COLUMBIA

I, Carleton J. Anderson, III, 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.

(Signature and Seal on File)

Notary Public, in and for the District of Columbia

My Commission Expires: March 31, 2017