

BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION  
and  
COMMODITY FUTURES TRADING COMMISSION

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IN THE MATTER OF: : Docket Number  
CREDIT ISSUES IN ENERGY MARKETS : AD03-4-000  
CLEARING & OTHER SOLUTIONS :

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Commission Meeting Room  
Federal Energy Regulatory  
Commission  
888 First Street, N.E.  
Washington, D.C.

Wednesday, February 5, 2003

The above-entitled matter came on for workshop, pursuant to notice, at 9:10 a.m., Chairman Pat Wood III, presiding.

APPEARANCES:

JAMES E. NEWSOME, Chairman, Commodity Futures  
Trading Commission (CFTC)  
WILLIAM HEDERMAN, Director, Office of Market  
Oversight and Investigations, FERC

## APPEARANCES CONTINUE :

JANE KANG THORPE, Director, Division of Clearing  
& Intermediary Oversight, CFTC

ANANDA RADHAKRISHMAN, CFTC

JOHN P. DAVIDSON, Morgan Stanley

MIKE GORHAM, CFTC

ROBERT STEWART, Merchants' Exchange

DAVID GOONE, InterContinental Exchange

CHARLES McELHENIE, Guaranty Clearing Corporation

NEAL WOLKOFF, New York Mercantile Exchange

ANDREW LAMB, The London Clearing House

DENNIS M. EARLE, EnergyClear Corporation

HAROLD LOOMIS, PMJ Interconnection

EDWARD COMER, Edison Electric Institute

CAROL ST. CLAIR, UBS Warburg Energy LLC

STEVEN M. BUNKIN, Goldman Sachs/J. Aron

ROBERT D. STIBOLT, Tractebel North America

VINCENT KAMINSKI, Citadel Investment Group

CRAIG G. GOODMAN, National Energy Marketers  
Association

## P R O C E E D I N G S

(9:10 a.m.)

CHAIRMAN WOOD: Good morning. This joint open meeting of the Federal Energy Regulatory Commission and the Commodities Futures Trading Commission will come to order to consider the matter which has been posted in accordance with the government in the Sunshine Act for this time and place.

Would you please join us in the pledge to the flag.

(Pledge recited.)

CHAIRMAN WOOD: It's nice to turn around and see a sister agency's flag up there with us, and we appreciate the opportunity to have a technical conference with you all and your good staff and with ours as well and with folks in the industry to discuss this important topic that we don't know a whole lot about, but we sure know we need to know more about it here at the FERC.

I think because guests get to go first, I will invite my colleague, Jim Newsome, to kick it off with a few thoughts.

CHAIRMAN NEWSOME: Thank you very much, Chairman Wood. On behalf of the CFTC, certainly I would like to welcome our guests industry participants and the public to this meeting. I think certainly it's a very timely conference with an extremely important topic.

First, I would especially like to thank my colleague and friend, Chairman Wood, for not only the idea but the invitation for the two agencies to work together as we have on a number of occasions over the last couple years.

The CFTC and FERC have certainly developed I think a very good relationship that starts at the level of the chairmen and Pat and I have had the opportunity to work together on a number of issues and the level of cooperation between the two agencies is as it should be. And to that, I'm thankful and proud.

I also want to thank FERC for the warm welcome to my fellow Commissioners, Commissioner Barbara Holman is not with us today, but Commissioner Walt Luken, Commissioner Sharon Brown-Ruska, you have made all of us feel at home.

Since many of you are not this familiar with the CFTC as you are with FERC, I thought I would take just a moment to explain a little bit about what our agency is and what we do, and then Jane Thorpe is going to go into more detail later in the program. The CFTC's mission is relatively twofold. One to foster competitive and financially sound futures markets and secondly to protect market users and the public against fraud, manipulation, and abusive practices within these markets.

The futures industry has grown very, very rapidly and has changed quite a bit over the years. It used to

known strictly an agricultural industry. The CFTC was known as an agricultural regulator. However, in the last 25 years, as I said, that has changed quite a bit. In fact to the point today that 80 percent of the futures contracts traded financial products, roughly ten percent are agricultural and the remaining ten percent are a mixture of energy and metals. So we're more recognized today as a financial regulator than anything else.

The industry has grown as well. In fact, this year over one billion contracts, futures contracts were traded on the regulated exchanges. The CFTC strives to protect the integrity of futures and options market really in three respects. First is the economic integrity of the markets so that they can operate free of manipulation and serve a multiple role, and that is as a means of risk management and also as a means of price discovery.

Second is the operational integrity of the markets so that transactions are executed fairly and that proper disclosures are made to customers. And then third, but certainly not least, is the financial integrity of the markets so that the insolvency of a single market participant does not become a systemic problem. And this is the issue that I think brings us here today, Pat.

As we look at the futures business, on the front line in defense against such problems are the clearinghouses

and the clearing members of the futures exchanges. By serving as a centralized counterparty, the clearinghouse serves an invaluable role in mitigating credit risks for market participants.

The CFTC is in the midst of implementing a new regulatory framework for the oversight of futures clearinghouses pursuant to the Commodity Futures Modernization Act. Among other things, among other changes at least to traditional futures laws, the Commodity Exchange Act now permits a derivatives clearing organization or we refer to them as DCOs to clear both exchange and over-the-counter contracts.

This important change follows a recommendation, and I might add long before the collapse of Enron, by the President's Working Group on Financial Markets. The President's Working Group is made up of the Treasury Secretary, the Chairman of the Fed, the Chairman of the SEC, and the Chairman of the CFTC. And it was formed primarily to meet in times of economic or financial crisis. However, that has been expanded to try and coordinate financial activities among the agencies represented.

But the working group made that recommendation that there should be the clearing of over-the-counter derivatives, and the President's Working Group noted at the time that the clearing of over-the-counter derivatives had

the potential to reduce counter party risk through risk management techniques such as mutualizing risk, facilitating offsets and netting. The President's Working Group also found that the over-the-counter clearing systems could serve a valuable function in reducing systemic risk by preventing the failure of a single market participant from having a disproportionate effect on the overall marketplace.

We at the CFTC are keenly aware of the challenges facing those who desire to use OTC energy derivatives as a risk management tool including the challenging issue of counterparty risk. Therefore, Mr. Chairman, I'm very interested in what our panelists have to say today in terms of talking about the benefits and the challenges of clearing. And as part of our effort today, as I mentioned earlier, Jane Thorpe will lead the first two panels and one of Staff and very close industry participants to talk about how are clearing regulatory structure and the system itself is set up, and then market participants that are involved in the clearing of both exchange and over-the-counter products.

So again, thank you very much for the opportunity to be here.

CHAIRMAN WOOD: Thank you, Jim, for those thoughts. Let's kind of make the two halves whole. Our half of the world at this agency at this time in our evolution is to make competitive energy markets work for

customers and our agency's really rate over three, an accomplishment of three major goals. Getting sufficient energy infrastructure in place, which of course ties back to having capital and credit to make that happen which is at the core of our nation's energy infrastructure. Making sure that there are fair and balanced rules of the marketplace, rules of the road, so that there's a real understood and workable market structure for these entities that really for most of the last century have been regulated by much more of a cost-of-service traditional regulatory model.

And then thirdly to have vigilant market oversight to make sure that it all works and we're kind of in a phase right now where we've definitely hit some speed bumps on the highway to pro-customer energy markets, but we think the best solution for that is a good education and good understanding at the on-set. So I view today as really a good educational opportunity for us at this agency and the industries that we regulate to better understand the tools that are being used with considerable success in other industries in our economy to make sure that we understand the implications of those and perhaps the benefits of those for energy traded commodities.

At the heart, energy business is weather business. And when I hear Jim talk about the history of the agriculture commodities, I probably think next to those, the

use of natural gas and electric power and oil are all really tied back to what's the weather. So if you've got weather business, that means you need to have a risk management business.

In the past, risk management has been dealt with very effectively by regulators by shifting all the risk onto the regulated captive customer. And through bipartisan consensus in the late 70s and throughout the 80s that was viewed to be something we needed to change. Put that risk back on somebody who can more effectively manage it.

And so here we are at probably the first time in our history when there's been an economic downturn and utility rates have not just rocketed up to make up for the reduction in load, but instead the risk of weather, of economy, of less usage of power and energy, has been put on industry players themselves and through the people that invest in and support those energy players. So we've had certainly a dislocation as a result of that downturn.

It's clear to us that risk management tools are needed. A number have been used successfully in this industry over the past 20 years or so, but that certainly for an industry that's a pervasive in our economy as it is, it's become clear to us from our looking around that there's a lot that is not being used here. So I view today as an educational opportunity not only for the regulator but also

for the outside industry that has taken this issue very seriously.

I was at the Bowers School at the University of Houston the day before last when a lot of these issues were being discussed and clearly the industry has well had the regulator surprise in trying to better understand not only clearing but a lot of broader credit issues that can be used to rationalize the allocation of risk across this energy industry that has a lot of risk in it.

So I'm hoping today to learn more from these good panelists. I appreciate the effort that Jane I know you and your folks have gone through and it really put together some of the best folks around and without laying it on too thick, on this panel and others, I do want to say we're your students so teach well.

Jane and Bill Hederman and Lee-Ken Choo to prepare for the day and our other staff folks working so closely together to prepare today, so without a lot of further adieu, would like to again welcome the three of you all to the FERC premises and turn it over to Jane and Bill Hederman for any opening thoughts you all may have.

MR. HEDERMAN: Thanks, Mr. Chairman. We briefly want to set the scene here. The energy markets are in severe financial distress. I don't think that that is a new observation. There's a loss of confidence in the markets

and this is feeding on itself. There is a significant amount of debt coming mature in the next few years and this makes for a strong need to move forward quickly to address the credit issues for the energy markets. A number of credit solutions are emerging and we look forward to not only setting the context of how credit clearing and the alternative solutions work, but hearing some specific proposals around what may work for the energy market.

We've laid out briefly the fact that both long-term debt and short-term debt exceeding \$100 billion is coming due just in 2003. This will need to be refinanced, and as well the rating of the companies continues to go in a negative direction and the little bit of activity this year 2003 indicates more of the same rather than we've quite reached the turnaround yet.

As we've mentioned, the counterparty risk management, whether through clearing or other solutions, is a necessary part of rebuilding trust. We moved in regulation I think, as you've noted, from the contrast of the beginnings of regulation where it was about trust busting to now where we need to do trust building. And a bit part of what we want to come out of that is in the market liquidity which is essential to the competition the Commission hopes to see.

I think in the offering of solutions that we've

seen so far, there is responsiveness to the needs of the energy markets but nobody's quite hit the nail on the head yet. We hope that we can accelerate the conversation so that those offering solutions and those needing help can communicate more efficiently about the needs and how to address them. And so today's conference will review some of those solutions, try to help all of us understand the advantages and disadvantages of the possibilities in the context of the energy markets, and again help the industry and the Commission move forward expeditiously.

And as well, to the extent that industry sees other roles for either of our Commissions to take to move this ball forward quickly, we hope to hear those suggestions as well.

I would to our audience say that I know that many counsels and Washington reps listen to what we're talking about. One thing that I've heard more than once is that this is not getting attention at the CEO level, that this is viewed as a back office problem. I would like to urge you to bring it to the attention of your CEOs because I think that it's a matter that needs high level attention if it's to move forward in a timely way.

And with that, I'd like to turn the podium over to Jane Thorpe and my colleague who we have been working with closely to put this conference together and I am happy

to say on the investigations enforcement side also working closer each day as we go forward. So thank you. Jane?

MS. THORPE: Thank you, Bill and thank you Chairman Wood and Chairman Newsome. I'd like to start by giving a brief outline of the first two panels on clearing that the CFTC has organized for this conference today.

John Davidson of Morgan, Stanley will explain the fundamentals of the clearing process and why clearing is beneficial and how you can evaluate the different clearing organizations and some special considerations to think about when looking at OTC clearing organizations.

Ananda Radhakrishnan, of the Division of Clearing and Intermediary Oversight will talk about how the CFTC regulates clearing houses and Mike Gorham, who is the Director of the Division of Market Oversight will talk about the CFTC regulates ensures market integrity on the regulated futures exchanges.

After lunch, on panel two, we'll have presentations from four regulated futures exchanges and one exempt OTC market that trades energy products, Merchants Exchange, the New York Mercantile Exchange and the Intercontinental Commodity Exchange, and from all four CFTC approved designated clearinghouses that clear energy products concerning their unique clearing models and the potential benefits that are provided by each of those

models.

Before we start with panel one, since many of you are cash market participants and may have varying degrees of insight into the CFTC and who we are and what we do, I thought I'd start by giving a few slides on some CFTC basics.

(Slide.)

The Commission is an independent agency of the U.S. government. Okay, I think we are one back, one slide back. The Commission is an independent agency of the U.S. government that was created by Congress in 1974. We regulate futures markets and options markets in the U.S. and the brokers who are intermediate on behalf of customers who transact on those markets. Until the passage of the Commodity Futures Modernization Act that Chairman Newsome discussed, we had no authority to license exchanges that provided facilities for the clearance and trades on over-the-counter markets.

The clearinghouses were linked in a one-to-one relationship with futures exchanges for which they cleared and we had only limited and indirect authority over the clearinghouses. Next slide.

(Slide.)

We're governed by five Commissioners appointed by the President, confirmed by the Senate. The President

designates one of these Commissioners as the Chairman of the Agency. The CFTC was reorganized in July of 2000 to reflect the mandate of the CFMA which authorized flexibility in how markets are structured, and establishing a separate registration category for clearinghouses. The division of market oversight evaluates each market to ensure that depending on the nature of the products traded and the sophistication of the participants trading those products, that an appropriate level is applied.

The Division of Clearing and Intermediate Oversight has responsibility for ensuring the financial integrity of the marketplace. We regulate clearinghouses, we regulate firms for capital adequacy and conduct of business.

We have 530 staff in various regional offices and headquarters in D.C., New York City, Chicago, Kansas City, Minneapolis and Los Angeles. We regulate 65,000 registrants. Fifty thousand of those are sales people associated with the firms. We have approximately 21 exchanges, not all of which are currently in operation, and we have 12 designated clearing organizations.

What is it that we regulate, and perhaps I'll start with what we don't regulate. The CFTC does not regulate cash markets or the forward market. The markets that we do regulate are ones that list and trade futures and

options in their regulated environment. And as I mentioned, for those markets, we have a flexible paradigm that no longer requires that all markets satisfy the traditional exchange model to operate. And Mike will talk about that during his presentation.

We regulate clearinghouses that clear regulated and OTC market transactions and under the CFMA clearinghouses are no longer simply adjuncts to regulated futures exchanges. The statute de-linked the execution function of a market from the clearance function that the clearinghouse provides. And it gave us the direct authority over these clearinghouses and authorized us to regulate them as direct clearing organizations that the Chairman mentioned.

In Congress, in following their recommendations of the President's Working Group authorized the DCOs to clear OTC transactions. And finally, as I mentioned, the CFTC regulates market participants who act on behalf of customers. These include futures commission merchants or essentially the brokers, floor brokers who execute on the floor of exchanges. We have trading advisors that we regulate and we also regulate operators of pooled investment vehicles, entities that we call commodity pool operators.

Again, all of those have sales people together 65,000 registrants all together. I think that's the end of

my slide.

(Slide.)

We have our e-mail address on the website. You can certainly get more information about the Commission by logging on. I'd like to start with the panel. As I mentioned, John Davidson is going to give us a presentation of the fundamentals of clearing, what we call "clearing 101" but just before he starts, I'd like to have all of you look at the three speakers that we have on this first panel because there's one thing that all of them have in common. They're all alumni of the Chicago Mercantile Exchange.

John Davidson used to run the CME clearinghouse division. Ananda Radhakrishnan joined the Commission three months ago from the CME clearinghouse, and Mike Gorham used to be in very senior positions within the exchange environment. This is not a plug for the CME but I thought it was an interesting factoid to put out there.

John, please.

MR. DAVIDSON: Thank you very much. Chairman Wood, Chairman Newsome, Commissioners, ladies and gentleman, my name's John P. Davidson, I'm a managing director responsible as the global co-head for sales and trading infrastructure at Morgan Stanley. What I'd like to first express is that any opinions that I express in this chat today are my own opinions, not necessarily those of Morgan

Stanley.

I'd like to take you through an overview of some of the fundamentals of clearing, talking reasonably generically about how clearing organizations operate particularly in the United States, talking about some of the operational characteristics, some questions that one might want to ask about a clearing organization, be it a futures clearing organization, a cash product clearing organization or derivatives product clearing organization. Go over some particular characteristics of clearing over-the-counter derivatives at a clearing organization and then summarize and would certainly be happy to entertain any questions at any point in time.

(Slide.)

If we can turn to the first slide thank you. I think the key thing to keep in mind about clearing is a concept called novation. So what happens with clearing is that there's a substitution of a central counterparty, that is to say, the original contractual obligations that have been entered into and agreed by the two counterparties to the original transaction, those are extinguished and they are replaced with obligations by and to the central counterparty.

It doesn't matter the nature of the marketplace, it doesn't matter whether the two counterparties knew each

other when they struck the deal or operated in a so-called blind trading system that they didn't know each others identities. Regardless, the original obligations of the two counterparties in the transaction to each other are novated by obligations to the central counterparty sometimes interchangeably called a clearing organization or a clearinghouse.

So what are some of the characteristics of the central counterparties or clearing organizations? What gives them the wherewithal to take this role in the marketplace and have this central focus of being in the middle of all of the transactions involved in the particular markets which they clear?

There are several characteristics: First of all, central counterparties or clearing organizations have standard for admission and standards for continuing participation. So there is a hurdle, if you will, that you have to meet certain typically financial, integrity transparency of financial statements, minimum capital, before you can become a clearing member of one of these central counterparties.

And then you have to assure that at all times on a continuous basis, you maintain at least those minimum standards or you can no longer be a clearing member of the central counterparty.

So, in the first instance, they are selective. Second, there's a standardization of product terms. You can't just clear anything that two people happen to agree to transact in.

There needs to be some standardization, and that standardization is usually imposed by the central counterparty or by agreement with the exchange for which it

clears, and that product standardization and those product terms are fundamental to those things which the central counterparty will clear.

We'll talk a little bit about why it is that you need to have standardization in a clearing process a little bit later.

The next characteristic is that central counterparties have very robust transaction comparison and affirmation systems. That is to say, it's abundantly clear to all participants and to the central counterparty, who did what transaction for how much with what characteristics, okay?

And as we look at some of the issues with some of the cash markets from time to time, this is a very important characteristic and really a contribution to the systemic healthiness of the market. The fact that there are rigid rules and procedures and almost always automated systems for obtaining these timely agreements and acknowledgements among all the parties to exactly what it was that was transacted, is an important characteristic of what central counterparties add to a marketplace.

The next thing and fundamental to the financial integrity which Chairman Newsome talked about with respect to central counterparties, is that they impose collateral requirements on all participants. Central counterparties

clearing organizations have one set of minimum rules and every single participant in that clearing organization has to comply with those minimum rules.

And that applies to collateralization as well as other forms of business conduct. So, regardless of the capitalization of the particular clearing member, it still has to typically collateralize every single obligation it has with the clearing organization.

Futures exchanges at which Morgan Stanley is a member have clearing members whose regulatory capital is in the order of \$2 million and it has Morgan Stanley, whose regulatory capital is in the order of magnitude of \$4 billion.

Both the \$2 million capitalized entity and the \$ billion capitalized entity have to collateralize their obligations at the clearing organization.

That's in fairly stark contrast to some of the models in non-cleared markets, where there is sort of an as-needed bilateral agreement for exchange of collateral among participants.

The next characteristic of clearing organizations is that there is frequent mark-to-market utilizing objective valuations, so the mark-to-market, the exchange of cash among the clearing members and the clearinghouse to bring everybody up to the current level of price is done by

evaluations of the value of each of the contracts that the clearing organization makes, utilizing sources of prices that it feels have integrity, not prices that are necessarily provided only by the participants in the clearing process.

The next characteristic is the clearing organization has typically a variety of contingent resources, so, above and beyond the collateral which each of the participants has posted with respect to its own obligations, the clearing organization itself has call on resources, financial resources in the event that those deposits of collateral are not sufficient to meet the ongoing operation of the clearing organization, and we'll talk about that in a little bit more detail, as well.

And, finally, clearing central counterparties, clearinghouses, clearing organizations, have an oversight role in the marketplace itself with respect to their clearing members, and also have some sort of financial regulation imposed, typically by a governmental agency. In this case, obviously, it's the Commodities Futures Trading Commission.

(Slide.)

MR. DAVIDSON: We can turn to the next slide. There are some important considerations about the clearing function that I think are very important to have an up front

understanding about, before we go into any of the specific details of the operations.

The first question is to whom does the clearinghouse guarantee extend? And I would say that there is a fair amount of vagueness and confusion on this point, even in reasonably experienced, knowledgeable participants in the futures market.

The key thing to keep in mind is that the clearinghouse guarantee typically only extends to the direct participants in the clearing process. That is to say, it extends to clearing members.

Typically, those clearing members are intermediaries. They don't have to be intermediaries; they could be end users of the marketplace who agree to subject themselves to the rules of the clearing organization, but they are typically intermediaries, so that if you look at your obligations in a market which features clearing, and there is some sort of intermediary between you and the clearinghouse, then you are not entitled to the guarantee provided by the clearinghouse, but only that intermediary through which you deal is entitled to that protection.

Now, you can make an argument that individual market participants and end users, beneficial owners of accounts, indirectly benefit because, typically, there is less systemic risk in a cleared market than in an uncleared

market, and that's a benefit to all market participants. But the direct benefit and the credit intermediation is provided to the clearing members by the clearinghouse.

There are some examples, particularly outside of the United States, where there is an extension of the clearinghouse guarantee beyond the clearing members. For example, the BM&F, which is a futures exchange in San Paulo, Brazil, extends its guarantee beyond the immediate clearing members for fully-disclosed accounts.

In the past in France, the Matif has extended its guarantee beyond the immediate clearing members of the Matif clearing organization to again fully disclosed beneficial account holders in the process. But those two are very much exceptions, and the general rule -- and obviously one should always check on what the specifics are before entering into a transaction in a market -- the general rule is that clearinghouse guarantee protects clearing members and the marketplace does not necessarily, in the first instance, protect end users of the market.

The next important clearing consideration to have a discussion of is this issue of risk mutualization. And the question is: Is risk mutualization fundamental to clearing?

It is fair to say, and particularly in the United States, that risk mutualization is a frequent characteristic

of clearing organizations. It is not an inherent characteristic of clearing organizations. So, risk mutualization, that is to say, the joint sharing by the clearing members of the risk of the clearinghouse itself, is typically accomplished in a number of ways:

A clearing organization may have so-called clearing funds. At our alumni association it calls them security deposits. Clearing funds, guarantee funds, security deposit pools, all of those things are very liquid collateral deposited by each clearing member, that are available to the clearinghouse to meet its needs in the event of a default, a failure of one of the clearing members.

So, the direct participants have agreed that their resources deposited in the clearing fund are at risk in the event of a default of any one of the other clearing members. That, indeed, is one of the reasons why not every end user cares to participate directly as a clearing member of a clearing organization.

Because if you participate directly in a clearing organization that uses risk mutualization, you may be called upon to contribute your capital to the resolution of a financial crisis at one of the other clearing members.

Capital and retained earnings of the entities that are the central counterparty is also a fairly common

means of mutualizing the risk in the marketplace.

And, finally, credit facilities, particularly those that are repaid by transaction fees imposed on the marketplace by the clearing organization, or repaid from assessments of the clearing members, can be thought of as a form of risk mutualization.

However, there are cases where the central counterparty can operate without risk mutualization, and you can really think of that as instead of mutualizing the risk, the central counterparty syndicates the risk. A very well known example of that is the predecessor organization to the London Clearinghouse called the International Commodities Clearinghouse, which was founded in London in 1888. It did not mutualize risk.

It evolved over time, obviously, but risk was syndicated among the at the time, five clearing banks in the United Kingdom. It was not shared by the participant clearing members of the ICCH clearinghouse.

Vault insurance, which is frequently used in clearing organizations as one of their clearing resources, is another example of a non-mutualized resource where an insurance underwriter will syndicate out the risk of a default to a variety of other insurance carriers.

So, those are two of the key considerations that everyone sort of needs to keep in mind when thinking about

the clearing process. How far does the guarantee extend, and is there risk mutualization that is a characteristic of the particular clearinghouse that we're looking at?

(Slide.)

MR. DAVIDSON: So I'd next like to turn to some operational considerations about the clearing process and the intermediation function performed by that central counterparty.

And we'll talk briefly about several of these operational processes, but I should note that the specifics vary quite a bit among different clearing organizations, depending, in part, upon their history, depending on the nature of the market that they are providing a guarantee for, and sometimes even vary from product to product within the same clearing organization, again, depending upon different market characteristics.

So the first important issue with respect to clearing operations is this process called transaction comparison and registration. That is the submission by the direct participants in the clearing process, to the central counterparty, of the key economic determinants of the transaction, so, typically, whether a particular counterparty is buying or selling, the number of contracts or the quantity of the product which is being bought or sold, the maturity of the obligation, the contract to buy or

sell, and its understanding of who is on the other side of that transaction.

Obviously, in a marketplace that features open outcry as the primary means of trading, there is a fair amount of clerical work that goes into this process of submitting these transactions. In an electronic marketplace, all of that clerical work is eliminated.

The most common form of this sort of submission and transaction comparison is that both sides to the transaction submit their information about the transaction, however, one-sided comparisons are not unheard of. Certainly, the New York Mercantile Exchange, for many years has had a one-sided comparison process.

The over-the-counter credit default swaps market employs a one-sided confirmation convention, so both work. The key thing is that the central counterparty acknowledges that it has the identical transaction, knows the buyer and seller, and agrees with all of the key terms, and then it accepts that particular contract as one which it is willing to substitute itself for.

(Slide.)

MR. DAVIDSON: The next feature is netting and novation. Netting is an important feature of a clearing organization in that it has the ability to aggregate and then arithmetically net obligations in identical products

that each of the participants in the clearing process has.

Netting is predominantly an operational efficiency which the clearing organization offers to the marketplace. That is to say that if I, as Morgan Stanley, do 10,000 transactions in a particular day with different people in the futures market, in different products, all of those are net-down into a single obligation to pay money to the clearing organization or receive money from the clearing organization.

If those particular contracts that I traded 10,000 of in a particular -- 10,000 different transactions, I had to exchange funds with a mark-to-market process with each counterparty, and that would be a fairly colossal operational risk.

Furthermore, making sure that there is complete agreement on what the net amounts are and who owes whom how much, as well as minimizing the number of transactions that have to go through the banking system, is an important contribution to the efficient and effective operation of the marketplace.

So, the clearing organization does this netting on behalf of clearing members. It determines the portfolio for each of the participants in the clearing process, and it novates the contracts under its jurisdiction, which it has registered, netted, and novated.

Now, an important question to ask in any clearing organization is what's the timing of that novation process? When does the obligation between the two originally-contracting parties cease, and when does it gets substituted by the obligation to and from the clearing organization, or, if you will, when is the clearinghouse on the hook?

And this varies quite a bit between marketplaces and between clearing organizations. A number of clearing organizations, particularly those that support electronic marketplaces, interpose themselves between buyer and seller on a real-time basis, and as soon as the transaction is agreed between the participants, the clearing organization substitutes.

Even in open-outcry marketplaces, many exchange clearing organizations have a real-time substitution, that is to say, as soon as the transaction is matched in their electronic system, any time of day, they will substitute themselves.

Other clearing organizations say, well, it's not until the end of the trade registration and comparison process or at the end of the processing cycle or the beginning of the following day or after all of the settlement obligations of the participants for a given day have been made.

So this timing of novation is an important thing

to keep in mind when examining different clearing organizations. Obviously, the more promptly it occurs after execution of the transaction, the more valuable the service that the clearing organization is providing to the marketplace.

(Slide.)

MR. DAVIDSON: The next operational process is collateralization and mark-to-market. Each clearing organization employs policies for determining collateral requirements. And it's very important that this is distinguished from the methodology for calculating those requirements, okay?

In the futures markets in the United States, as well as to a growing extent, around the world, the organization which the three of us are alums of, has developed a calculation system called SPAN, which has a portfolio margining system which is widely used.

That's an important characteristic, but that's not a fundamental characteristic. The fundamental question is how does the clearing organization determine how much collateral to take for each product that it guarantees?

SPAN calculates the portfolio requirements on the basis of all of those individual product decisions, but fundamental is, how do you decide how much coverage to have? And different methodologies are employed by different

clearing organizations, but fundamentally what they're seeking to do is, with a high confidence interval, a high degree of probability, cover the likely change in value of each of their contracts between mark-to-market periods.

So if, as is typical in the futures industry, we mark-to-market every day, the collateral requirement is a very high probable one day's movement in the price; that is to say, the high probability of what the maximum one day's movement in the price is.

Now, economics are reasonably unconstrained, so there is no guarantee that what has historically been the maximum change in price in a particular contract, will be that change in price in the future. But they are seeking to require a collateral level which is sufficient to cover the maximum probable change in valuation between mark-to-market periods.

If, for example, they mark-to-market once a week, presumably they would need a much larger amount of collateral because the times which everybody has set back to zero, that is to say, have no obligations because they have paid in full and extinguished their debt obligations for these particular contracts, is a longer period of time, and a greater period of time means more probability of adverse price movement.

Again, they're requiring collateral movements,

and, if you will, in a reasonably agnostic manner where all of the people that are long contracts have to collateralize, all of the people that are short contracts have to collateralize. They have to collateralize the same minimum amount.

The clearinghouse doesn't pick market direction. It assures that there are adequate resources on hand, regardless of whether the price of, if you will, crude oil, moves up or moves down. The clearinghouse has balanced obligations from all of the counterparties. It's just as much at risk to an increase in price as it is to a decrease in price.

This issue of prices is then the next thing. The clearing organization needs to find prices and perform this mark-to-market process. And it needs to have an understanding, which is typically an understanding that's formed in its rules, and, therefore, is a condition on participation in the marketplace, on what its source of prices are.

Now, in an exchange market, that's reasonably straightforward. You go to the exchange with which you are affiliated and obtain their closing prices for the various products that you are guaranteeing.

One of the key characteristics of whether or not you can have a clearing organization for non-exchange traded

products is whether or not there is an agreeable source of prices, agreeable and continuous source of prices about those products. If you can't price, you can't clear.

Finally, the clearinghouse that has all this collateral and needs to move all of these mark to market payments in cash among clearing participants needs to have some method of interfacing with the banking system. Derivatives clearing organizations are typically not direct members of the banking system but interface with the banking system through settlement banks. Certain of the cash clearing organizations in the securities markets are limited purpose trust companies and are direct participants.

(Slide.)

The next slide, a few more of these characteristics, exiting or offsetting positions. This is one of the most important economic benefits that a clearing organization provides the marketplace.

By virtue of the fact that the clearinghouse has substituted itself between the direct and original contracting parties to a particular contractual obligation, when it comes time for a particular member to exit his or her position, you don't have to find the party with whom you originally contracted. You can go to any of the clearing members in the clearing process and negotiate a price at which you are willing to unwind or offset your transaction.

(Slide.)

Now obviously, that negotiation in the exchange context is done within the rules of the exchange, and in an

over-the-counter market might be done within a different set of rules. But the fundamental advantage is I don't have to go back to that original counterparty, I have available any willing clearing member with whom I can offset my obligation, assuming that we can agree upon a price.

A second and very important feature, particularly when you're looking at in contrast to the wind-down of some of the firms that have experienced difficulties recently in the energy markets, once an obligation is offset with a clearing organization, it's completely extinguished. It no longer exists. I'm not an attorney, but I've been assured there's a lot of legal precedents that these are not economically offset obligations that, notwithstanding the fact that the economics is offset, still continue to exist into the future until their maturity.

These contractual obligations, when the clearinghouse says you have offset your positions, are extinguished for all purposes. There is no ability for them to be quote/unquote "cherry-picked" by a, for example, trustee in bankruptcy or any other party. They're gone. They're terminated. They're done. That again is very important with respect to the ability of the marketplace to continue to operate after the demise of an important market participant.

(Slide.)

The next function which a clearing organization performs is the oversight of the maturity of contracts, the delivery, as we call it, against futures contracts, the exercise and assignment of options, and the expiration of options to the extent they're not exercised and assigned.

I won't go into any of the details about exactly how that process works, but I think the very important question to ask when examining a particular clearing organization is how does it treat these contract maturity issues.

So to the extent that the contract calls for delivery of a particular underlying commodity or a particular financial product, does the clearinghouse's guarantee extend to the performance of those delivery obligations? And if it does, is it the specific performance of those delivery obligations? In other words, do I specifically get a barge full of heating oil in New York Harbor, or do I get made whole for economic damages associated with the change in price on a nonperforming delivery obligation?

There's a big difference in terms of the impact on market participants in the unlikely event of some sort of issue with the ultimate fulfillment of the terms of the contract. And that's an important thing, and again, practice varies from clearing organization to clearing

organization.

The last of the operational characteristics I'd like to talk about are the default procedures. Obviously, just as is the case with the CFTC in the oversight of financial intermediaries avoiding a default is the number one mission both of the regulator and the self-regulatory organizations, including clearing organizations.

So understanding the financial condition of those clearing members and taking appropriate action as their financial condition deteriorates is the most important oversight function of a clearing organization.

But they are all prepared to deal with the possibility that that process is not successful, and one of the clearing members defaults on its obligations to the clearinghouse.

The first thing that all default procedures contain is the deployment of liquidity facilities. Job number one of a clearing organization is to meet all of its obligations to the remaining participants in the clearing process so that if there's some reason why Party A doesn't meet its obligations, the clearing organization must immediately step in and meet those obligations for Party A, so that all of the people on the other side of the transaction are made whole and are made whole at the same time that they would be made whole on any other business

day.

That means the clearing organization has to have lines of credit, typically from banks or other financial intermediaries, that it can draw upon on a temporary basis to immediately meet those financial obligations that it has. If it doesn't do that, it doesn't have any integrity, then it might as well cease to exist as a clearing organization.

I worked at the Chicago Mercantile Exchange during the stock market crash in 1987, and the rumors about the inability of the Chicago Mercantile Exchange to honor its contractual commitments were a very important source of chaos in the marketplace on the early days of October 19th and October 20th. It turns out no clearing members of the Chicago Mercantile Exchange defaulted on obligations. But merely the rumors that financial resources were insufficient caused disruption in the marketplace.

So that's the most important thing in a default procedure is what other liquidity facilities? Can they be drawn on quickly? Can it be very clear to the marketplace that the clearing organization is playing its role?

Agent versus principal positions, particularly in futures markets, are a very important distinction that clearing organizations make. To the extent that they detect problems in advance of them actually coming to fruition, and to the extent that the clearing member defaults with respect

to its principal positions, the clearing organization will make every attempt to transfer the obligations of customers, who may not be directly involved, to other financially whole clearing members, so as to minimize the, if you will, knock-on consequences.

The clearing organization has the right, however, to liquidate the customer positions as well as the principal positions if there has been a default in the agency or, if you will, the customer part of the positions held at the clearing organization.

The next thing that happens is the liquidation of that defaulted clearing member's portfolio by the central counterparty. So making sure the counterparty has the facilities to liquidate, has accounts open with various clearing members, understands how to get access to the market, that liquidation has to happen quite promptly.

The whole basis of the collateralization is covering a one day's move in the marketplace. That suggests that liquidation of that portfolio will happen on one day. Because if it doesn't, fairly much by definition, the collateral may not be sufficient.

So once liquidation is done, you then apply the resources that are available to the central counterparty from the defaulting member. Those resources are typically the margin deposits or the collateral deposits that the

clearinghouse holds from that clearing member, and those collateral deposits, assuming that the movement in price has been as anticipated by their collateral management policy, should be sufficient to cover all of those obligations.

There is, however, the possibility that the price change will be greater than the amount of collateral that the clearing organization holds, and then it has to move down to those contingent resources, the clearing fund, the capital retained earnings and surplus capital of the clearing organization itself, the ability to assess clearing members to make the clearing organization whole.

(Slide.)

We turn to the next slide. There's some key questions which I suggest we ought to ask about any central counterparty, either in an existing marketplace or someone who's proposing to be a central counterparty for a marketplace that doesn't have one yet.

Most directly, what are the minimum membership standards? What are the minimum standards it takes to become a clearing organization, a clearing member of the clearing organization? Do those minimum standards have credibility?

Second of all, how does the clearing organization perform financial surveillance of its members? How does it know that each clearing member is continuously in compliance

with the minimum capital requirements? What's the process that it goes through to do that? Does it specifically have inspection powers over the books and records of its clearing members so that it can actually go in and see and is not reliant exclusively upon financial reports?

Do the clearing member capital requirements increase in proportion to position risk? So that if I'm a clearing organization and I say that the minimum standard for being a clearing member is \$2 million in regulatory capital, as my positions increase as a clearing member, it should be the case that the amount of capital I have available to meet those obligations increases.

And most typically, clearing organizations have capital requirements that are more stringent than the minimum regulatory capital requirements that, for example, the CFTC would impose upon financial intermediaries, because they're dealing with risk that is beyond the de minimis amount of risk likely in the system.

We talked briefly about how collateral requirements are determined, and one thing one might do in looking at collateral requirement adequacy is do a historical back test. Have the clearing organizations' collateral requirements been sufficient in all cases to cover historically observed movements in price? If not, why not?

How frequently is the adequacy of collateral requirements reviewed? If we set today collateral requirements for a bunch of futures and over-the-counter contracts, do those stay in place for the next five years regardless of volatility in the market, or is the clearing organization promptly seeing that volatility increases and increasing collateral requirements in response to that, and as volatility decreases, making appropriate decisions about whether or not collateral requirements should decrease?

Are there heightened collateral requirements for concentrated positions? So if Morgan Stanley just has a well diversified portfolio of positions, maybe the minimum collateral requirements are fine. But if we have a very large share of the open interest or the open un-offset contracts in a particular product, we ought to have higher collateral requirement because of that concentration of risk.

Likewise, are there heightened collateral requirements for illiquid positions? Even in an exchange marketplace, which is among the more liquid marketplaces in the world, there are deferred contract months. There are away-from-the-money, deep-in or deep-out of the market option, deep-in or deep-out of the money options, that are not very liquid. And so one might impose higher collateral requirements on illiquid positions than on the front and

most actively traded positions.

Are collateral requirements calculated on a portfolio basis? Do you look at the entire portfolio and judge the risk of that portfolio?

What forms of collateral is accepted, and how is that collateral valued? Are there appropriate haircuts taken to the value of the collateral to offset the possibility that the collateral value has an adverse market movement?

Go to the next slide.

(Slide.)

Some more questions. How frequently is mark-to-market performed? With respect to clearing organizations and clearing members in U.S. Futures Exchange, that actually happens twice a day. But as between the vast majority of customers and the clearing members, it only happens once a day. But even once a day is significantly more in many cases than in a number of cash and over-the-counter markets.

What is the source of prices, and particularly prices for inactive and less liquid contracts for mark-to-market? Do we just take the last observed price in a marketplace that isn't particularly liquid? If the market closes at 3:15 and the last observed price was at ten o'clock in the morning, is that the price that we mark everyone to? Or do we have some convention for looking at

the bid offer in the marketplace, having a theoretical pricing model, some other means to, if you will, freshen up the price of those deferred illiquid contracts?

How large are the committed credit facilities that the central counterparty has, and how large are they in particular relative to the magnitude of expected mark-to-market cashflows?

Now how large are the committed credit facilities is something that everybody can ask, right? So Morgan Stanley goes on the Web sites of the various clearing organizations and sees this one has \$350 million in committed credit, this one has \$250 million.

Only the clearinghouse organization and its regulator can ask the second part of the question, which is how large are those credit facilities relative to the mark-to-market cashflows from the largest participants?

So if Morgan Stanley sees that on a really chaotic day in the stock market, we pay a billion dollars to the clearing organization and the clearing organization has \$350 million worth of liquidity, we can make a judgment about that.

But we really don't know that our billion dollars is the biggest obligation to the clearing organization because we don't know what Goldman Sachs has and what Merrill Lynch has and what Solomon Smith Barney has. The

clearing organization knows the answer to that question. The regulator of the clearing organization knows the answer to that question, but the market participants themselves do not.

Do the contingent resources of the clearing organization increase as the magnitude of central counterparty's risk increases? So if we just opened the marketplace and it doesn't have a lot of open contracts and it isn't very large, it can have one level of contingent resources. But as the obligations which it is guaranteeing increase, it ought to automatically get a greater amount of contingent resources. Otherwise, it's not likely to be able to meet its obligations in the event of a default.

How subject to failure to mitigate defenses and other delaying tactics are the non-possessory contingent resources? So, for example, again in our former institution, there is the ability to assess clearing members for the funds needed to make the clearing organization whole. And that assessment in the past was viewed as being, well, the aggregate capital of all the clearing members. But if the clearing members have some ability to delay paying that assessment, then the assessment isn't nearly as valuable as a possessory form of collateral like cash or treasury securities.

So what sort of delaying tactics -- if you have

default insurance but the insurance providers can wait nine months before they decide do they really have to honor that request for payment, I would say that default insurance isn't worth a whole lot. So that's a key thing to examine with respect to contingent resources.

How knowledgeable are the staff of the clearing organization? Obviously in the past it's been very knowledgeable.

(Laughter.)

MR. DAVIDSON: But who knows about today. And finally, who regulates the central counterparty is a topic which my colleagues here to might right will address.

(Slide.)

I'd like to briefly touch on clearing for nonexchange markets, over-the-counter markets, other forms. The first question that comes is, well, are there really an examples that the energy markets can look to for clearing of non-exchange markets? And I think you'll hear some speakers who have very good examples.

But in the United States, the largest marketplace in terms of transaction volume is actually not an exchange. The NASDAQ is a dealer market. It may become an exchange very soon, pending approval by the Securities and Exchange Commission, but it is in fact not an exchange today. And it's been cleared by the National Securities Clearing

Corporation since the early 1970s.

The product for various European repurchase agreements on sovereign obligations and the swap clear markets are both examples of over-the-counter, non-exchange markets that the London Clearinghouse currently provides central counterparty clearing services for. So there are indeed a number of examples.

Some key considerations with respect to clearing a non-exchange market. The first is, is there a standardized product being traded in the marketplace today, or can a so-called plain vanilla product be effectively standardized? Futures exchanges by definition offer standardized products, so that isn't typically an issue.

But marketplaces may have different ideas about what the specifics of even a plain vanilla contract for electricity congestion between two points is, for example. So my definition and the counterparty's definition may not be identical in every respect.

In order to be cleared, it needs to be identical in every respect. So we need to modify our trading conventions in a way that can be standardized, or the clearinghouse has no point, has no ability to easily liquidate, and has no ability to net the obligations.

Is there a critical mass of common counterparties in the marketplace? So the most common example of that is a

dealer marketplace. So swaps clear, for example, is an agreement among the dealers in swaps in the London marketplace to have the imposition of a central counterparty. If they're not a common set of dealers with a sufficient critical mass, then the clearing organization is not likely to be greatly beneficial to the marketplace.

Are the counterparties allowed to participate in risk mutualization systems? So if you for example had a marketplace -- completely hypothetical example -- if you had a marketplace that had nothing but ERISA participants in it, I would say that that marketplace cannot have a clearing organization. ERISA plans cannot mutualize risk. It's just not allowed by the Department of Labor and the current regulations. I don't know of any markets like that, but that's an important question to ask.

Is the financial condition of the counterparties readily surveillable? The issues that we've had here in the United States with respect to the transparency and the adequacy of our accounting standards is a very important issue with respect to the intervention of a clearing organization.

A clearing organization is only as good as its knowledge about the books and records, the financial condition of its clearing members. And if those parties don't have readily surveillable books and records, it's

going to be very difficult to envision that a clearing organization can do its job. A clearing organization isn't a panacea. It's just simply a manner of disciplining a marketplace.

Is there a mutually acceptable source of prices for all maturities of the products being traded? Again, as I noted before, you cannot clear what you cannot price. There needs to be some source of prices, even if it's a survey by a third party, that covers all of the products that are to be cleared, or you have a situation where there's a subset of the product where there are agreeable, easily agreed upon prices, and there's a subset of more deferred contracts which there is no set of easily agreed upon prices, we cannot clear the deferred products. We only clear the close to maturity products.

Can the risk of the product be adequately modeled in the systems for determining collateral requirements? There are a number of very exotic over-the-counter derivative contracts which are extremely difficult to model. They are not likely candidates for a clearing process.

I hope this has been insightful with respect to some of the features of clearing organizations and clearing systems. I think in conclusion, clearing is one of several methods available to provide credit enhancement to important markets. Among the additional benefits that a clearing organization or central counterparty bring to a market are those enumerated by Chairman Newsome at the outset. The ease of offset from existing positions, the added transparency of the credit intermediation process, the netting of obligations with respect to the operational efficiency and in most places in the United States the neutralization of risk among the participants in the clearing process and the incentive that that provides for them to self-police each others behavior.

Credit evaluation in a cleared market is ultimately no different than in any other market. The questions are the same. Who is my counterparty? Even if it's the clearing organization, you still have to understand the creditworthiness of the clearing organization. Not all existing clearing organizations have exactly the same creditworthiness. So you need to make decisions about who's your counterparty, what financial resources does your counterparty have, what's the liquidity of those financial resources. It can have massive net worth but if it isn't liquid, the clearinghouse can't do its function.

What's the impact of systemic risk on that counterparty. What other things is that counterparty in the business of clearing, are there particular systemic risks related to those other things that it may be clearing.

So that's an overview of some of the fundamentals of clearing. Again, I'd be happy to answer any questions that anybody asks.

CHAIRMAN WOOD: If I'd thought to bring an apple, I'd put it in front of your desk, teacher. What are non-systemic risks? What would some examples be?

MR. DAVIDSON: A non-systemic risk, I would argue for example a non-systemic risk is a risk that does not have consequences outside of the parties that directly interface with the party that doesn't meet its obligations. So a classic example is if you have a small financial intermediary that fails to meet its obligations, I'd think you would safely say that that's a non-systemic risk.

Market risk, as a general rule, is a non-systemic risk. Our expectation is that most market risks in a well-designed clearing system can be easily handled by the clearing organization with a combination of its collateral and mark to market policies. So any risk that doesn't go outside of the particular marketplace or the particular contracting parties is a non-systemic risk.

Systemic risks are risk that have a danger of

going into the financial system as a whole or the marketplace as a whole.

CHAIRMAN WOOD: And in your experience, you made a statement at the front end, one of the benefits of having the guarantee in the clearinghouse itself were that it produced -- the systemic risk in these cleared markets and I'm just trying to get a sense for what's the magnitude of systemic versus, I mean how much of the total risk does a cleared market in those institutions kind of take off the table?

MR. DAVIDSON: I think you could ask that question of a raft of economists and get reasonably different answers. The systemic risk is fairly difficult to predict and quite difficult to quantify. I think you can answer that question with respect to what is the benefit of netting in a marketplace and again it varies from marketplace to marketplace but in a number of the financial markets, we have seen that netting reduces the bilateral obligations in the marketplace by on the order of 90 to 95 percent. That's a slightly different answer than how much systemic risk has been reduced, but that at least demonstrates one of the important benefits of the clearing organization. I'm not really qualified to answer the question how much systemic risk is reduced. It's in large part a function of how well the clearing organization is

designed and how well it's regulated.

A clearing organization which is poorly designed, poorly regulated, operates without knowledgeable staff, could be argued to increase systemic risk by concentrating all of the eggs in a single basket. We don't have a lot of examples of that I'm happy to say, but that it isn't a necessary characteristic of a clearing organization that it reduces systemic risk, it is a happy byproduct of a well organized, well operated, well regulated clearing organization.

CHAIRMAN WOOD: In determining when you mentioned, back on page 11, is there a critical mass of common counterparties. That's certainly the message I heard a couple of days ago in Houston. Is there a rule of thumb? I think I mentioned there was a dozen or two dozen DCOs total. I mean is the energy industry the kind that lends itself to a couple of clearing organizations or just one? What do we see if folks here got more standardized products to trade, for example, and met some of the other key considerations here in the exchange or non-exchange market, what is the critical mass that's needed?

MR. DAVIDSON: Well, I think certainly the characteristics of the energy market is that there's a sufficient concentration of counterparties that you can have cleared markets there. It is certainly an area that I

believe is, certain parts of it, that is rich for the opportunity of introducing clearing into the process.

In contrast, I would suggest to you for example, that the distribution of mutual funds, where there are literally thousands of distributors of mutual funds, might not be as good a marketplace to introduce clearing to. Much different risks so you probably don't need it, but there's sufficient concentration in the energy market in terms of the number of participants even during the, if you will, pre-Enron days in the energy markets when there were quite a few more participants to introduce clearing and achieve that critical mass, assuming that you could convince the largest and most active participants in the marketplace to participate in clearing.

As to how many clearing organizations there ought to be, that's an argument, as Chairman Newsome will testify, that is subject some substantial amount of disagreement among market participants in the futures markets which have been cleared markets for essentially their entire history.

It's my personal belief that there are substantial efficiencies in having a single, common clearing organization across the futures exchanges in the United States. I believe those are not market integrity sorts of issues but those are marketplace efficiency and ease of financial burden on market participants, particularly

intermediaries kind of benefits. But certainly the exchanges and the existing clearing organizations in the United States do not all hold that there would be virtue to having a single common clearing organization as there is with the securities options markets.

Certainly, there is benefit historically you can observe to multiple clearing organizations, some of the innovations in the securities market clearing world have been introduced by very small clearing organizations, the so-called continuous net settlement system or CNS that's the central feature of the U.S. securities, equity securities clearing was established by the Pacific Stock Exchange Clearing Corporation out in San Francisco.

Indeed most of the fundamental procedures used in U.S. futures clearing organizations were established in roughly 1872 at the Minneapolis Grain Exchange which is not by any means today the largest of the exchanges in the futures markets, but my personal view is that fewer is better, but I wouldn't represent that that is a universally held view shall we say.

CHAIRMAN WOOD: Why would a player, energy or otherwise, not participate in the clearing organization? What would be the business reasons that would go through such a decision?

MR. DAVIDSON: There are a couple of things that

go into that decision. I think one of them would be, and again this is a little bit dependent on the rules of how the market operates, but if you have a view that as a market participant, your ability to make counterparty credit decisions is materially better than the rest of the participants in the marketplace, you may very well say that, well I can protect myself well enough, I can avoid transacting with these parties that are likely to fail, I can see early warning signs soon enough that I don't need the protection afforded by a clearing organization, I don't want to risk my capital in the mutualization of the risk that the clearing organization has because I think I do it better than the staff of the clearing organization can do it, so really I'm just, you know, sacrificing my shareholders' capital for the generic betterment of the market, not necessarily for the betterment of my shareholders.

It could also be the case that if you're a financial participant that believes that you can make a better return transacting in a market which tends to have relatively wide spreads, the interposition of the clearing organization which may serve to narrow those spreads, isn't necessarily a market feature that you would particularly be thrilled about. It means that your opportunity for profit is diminished and therefore your return on participating in

those markets is diminished.

So those are among I think the decisions that go into it. You may decide that you don't want to directly participate in clearing, you want to participate through some intermediary because you want to afford yourself some protection. I would suspect that the recent history in the energy markets in particular, but in a number of financial markets and the issues we have with accounting procedures in the U.S., has diminished the number of market participants that are quite that self-confident. And so the extent that there is a quality means to improve the operation of the marketplace and the transparency of the credit intermediation, I suspect there are a larger number of people willing to do that today than there were say three years ago.

But again that's a personal opinion and a speculative opinion on my part.

CHAIRMAN WOOD: Bill?

COMMISSIONER MASSEY: Would you characterize effective clearing as an essential foundation of a well functioning commodity market?

MR. DAVIDSON: I think clearing is a choice that a marketplace can make. I would not say that every single market that doesn't have a clearing organization is by definition not necessarily a well-functioning market.

I think that marketplaces decide what they need in terms of how to make sure that counterparty credit risk is adequately managed and efficiency and effectiveness are gained, and certainly there are a very large number of markets for cash products where there's fairly amount of substantial differentiation between geographic regions and things like that in the characteristic of the cash product that clearing doesn't necessarily make sense, and yet those marketplaces operate very effectively.

I think clearing is a benefit to the marketplace when properly structured and with the proper characteristics can take on and that improves the operation of the marketplace if it's properly managed and properly done, but I don't think you can go so far as to say, well, the forward market for wheat in the United States at the various county elevators isn't an essentially cleared market and therefore is somehow inadequate. I think that would be a bit of stretch.

COMMISSIONER MASSEY: Did I hear you say that effective clearing diminishes price volatility or did I just want to hear that?

(Laughter.)

MR. DAVIDSON: I don't think there's any evidence to suggest that it diminishes price volatility. Price volatility, in my opinion, happens as a function of the

economics of the marketplace and the economics of the environment in question. What a clearing organization that's well organized and well regulated does is it minimizes the adverse and unanticipated impact of that price volatility, but I certainly think you cannot see any systemic difference between price volatility in markets that are cleared and price volatility in markets that are not cleared, and I don't think you can show historical cases, certainly we talked about Swaps Clear from the London Clearinghouse. There hasn't been any reduction in the interest rate volatility since Swaps Clear was set up.

So I think price volatility and clearing are independent of each other but properly put together a clearing organization can diminish the adverse and unanticipated consequences of price volatility.

MS. THORPE: And Commissioner, just to add a little bit more information from our Commodity Futures Modernization Act, respective to what John Davidson was saying, the OTC markets are not required to clear their transactions in designated clearing organizations. They may but they are not required to do so.

The reason why the statute requires that transactions that take place in a regulated centralized futures markets for every contract that is standardized and is fungible is because those are the kinds of markets that

permit retail participation. Retail customers are not able to make the credit assessments that sophisticated counterparties who participate in the OTC markets are permitted to, so that's why the statute is saying that clearing must be provided for a regulated futures exchange; it is optional for the OTC markets.

COMMISSIONER MASSEY: I had a question of clarification. Did you say that the product being traded must be exquisitely standardized or just sort of standardized?

MR. DAVIDSON: The product being traded that is going to be subject to clearing needs to be exactly standardized. That is to say there needs to be absolutely no uncertainty as to what the product is and what the terms and conditions of the product is. So there has to be a decision as to, for example, what the specification of the underline is.

There has to be a well-established means of measuring those specifications and agreed upon, there has to be an understanding about how the contract will operate in the event of various contingencies, there has to be an agreed on maturity framework and agreed on termination process, an agreed on process by which people either exchange value or exchange the underlying product and where they can exchange that underlying product at the maturity of

the contract.

There even has to be agreement on something lawyers love to disagree on in writing a contract which is choice of law. It has to be under a particular jurisdiction. There can't be disagreements about whether we're going to use New York law in this case or Texas law, California law. All those things have to be agreed in advance.

COMMISSIONER MASSEY: Well I was thinking in particular you mentioned congestion, right? And I was thinking about those and what the role of this agency would be in defining the terms of a congestion right. Who would determine the particulars? Would that be the regulators or would it be the exchange or a combination?

MR. DAVIDSON: Congestion rights actually might be an example of something that doesn't immediately lend itself to clearing and that there can be changes over time into which particular parts of the grid have congestion and which don't, and you'd have to have agreement in advance that particular point A and particular point B are the two points that we're going to trade the congestion rights among. It's not going to be C somewhere in the middle or D somewhere beyond. And you'd have to have agreement on how much power was going to be moved from point A to point B over what period of time and how you're going to measure

that power and how you're going to make sure performance occurs.

In the over-the-counter marketplace, those are agreed among the contracting parties. If there is the imposition of a clearing organization in an over-the-counter marketplace, then the clearing organization standardizes those agreements. If it's a regulated marketplace, then there is some requirement for oversight in that process by the regulator but the exact context of that oversight has changed quite a bit with the passage of the Commodity Futures Modernization Act in that there used to be very specific review of each and every single term of the contract, and now there's a comparison of the terms of that contract to some, if you will, general principles about how a marketplace ought to act, and if it is consistent with those general principles, then there's a presumption that it is okay for those exchanges to trade that product and for the clearinghouse to clear that product. And for some reason it violates one or more of those principles and of course the contract can't be approved.

I would suggest that's the best model for oversight of those sorts of things. The parties in a clearing organization are capable of standardizing the obligations and agreeing on what it is that will be traded. The question is what sort of unintended consequences may

fall out of the way the clearinghouse operates, not necessarily the specific construction of the contracts. The clearinghouse will be successful or not successful in clearing particular transactions on the basis of how well it defines those products. If it gets point A and point B right, well then it'll have quite a bit of congestion rights to trade conceivably, and if it gets point A and point B wrong, there isn't any congestion observed out there, and there's no need to transact in that particular contract, no need to clear revenue available to the clearinghouse for interposing itself.

CHAIRMAN NEWSOME: Before I ask my fellow Commissioners if they have any questions, I just wanted to say to our friends at FERC, when you invite John Davidson to a panel, you get your money's worth.

(Laughter.)

MR. DAVIDSON: Thank you very much.

CHAIRMAN NEWSOME: John, I very much appreciate your willingness to take time away from Morgan Stanley to come here today and share your thoughts with us. John is the kind of market participant that every time we gather, we would like to have him there to share his thoughts with us, but we try to remain cognizant of the fact that he doesn't work for us, he works for somebody else, but we do very much appreciate your being here.

Commissioner Lukken, any questions?

COMMISSIONER LUKKEN: I just had one question for John. I have to be careful in using this term since I'm sitting next to a professor of economics, but it seems to me the clearing process has sort of a classical moral hazard where, especially in the energy field where entities of lesser credit may want to rush in. And of course today we're trying to not only get those companies, but also potentially companies with better credit ratings to come into the system as well. You talked about the mutualization of risk.

For somebody of lesser credit, it's a good deal to come into that system because they're passing off that risk to other folks, but somebody with a higher credit rating they may actually lose in that transaction. They may be taking on more risk in a mutualized system than they're getting in return.

So my question to you is are there other benefits you haven't talked about today of joining a clearing organization? Is there a sharing of profits for these organizations? I know reading some of the profit statements of the exchanges, it's sort of a cash cow for them, and so are there ways for people who are looking at the bottomline here today, they might be encouraged to come in, even though this might not be the best system for them if they're

looking to alleviate their risks?

MR. DAVIDSON: Okay. I probably need to disclose that Morgan Stanley was the lead underwriter for the IPO of the Chicago Mercantile Exchange, so again I'm going to express my personal opinion but we don't exactly have a fully objective view potentially.

There indeed is moral hazard as a potential in clearing. I think that's one of the primary arguments for having some sort of regulatory oversight of the clearing process to make sure that that moral hazard is appropriately mitigated and is dealt with. I think that the existing clearing structures do not impose unnecessary moral hazard on the marketplace. To the extent that participation is voluntary, you can, even in markets where clearing is mandated, always deal through an intermediary to access that marketplace. You mitigate some of the systemic danger of that moral hazard. But fundamentally it's up to the design of the clearing organization to make sure that moral hazard is minimized.

The other benefits we did touch upon include the efficiency of the, if you will, post-execution operation of the marketplace. That is to say we talked about the benefit of netting, we talked about the benefit of having very rigorous procedures and in almost all cases electronic procedures for registering contacts and acknowledging the

obligations among the different counterparties.

One of the things that consumes the largest number of resources in our case with respect to dealing with over-the-counter markets, is just chasing down confirmations of transactions and making sure that they have all been executed and making sure that our version of the contract is identical to the counterparty's version of the contract, and making sure if there hasn't been an intermediate payment for, you know, 12 or 18 months, that when it comes time for that reset or when it comes time for the maturity of that contract, the counterparty really remembers the contract with the same terms that we have.

So those are sort of efficiency and effectiveness benefits. And depending on the volume of transactions going through the marketplace, those are benefits that even the most creditworthy counterparty is going to derive from a clearing environment.

Now obviously you can have systems short of clearing that do a number of those steps, and indeed there are providers of services, even clearinghouse-related providers of services, that don't go all the way to clearing but perform a number of the steps short of clearing that increase the efficiency. So it's not like it is completely an either/or choice.

With respect to the profitability of clearing and the distribution of those profits, that is really a question

of how the clearing organization and the market participants choose to organize themselves.

Many clearing organizations begin as mutual organizations; that is to say, they -- and nonprofit mutual organizations. They are organizations that are owned by their clearing members, by the participants in the marketplace, and they essentially try to have revenue and expense sufficiently equal so that absent investment in long-term improvements in the system, there is no excess profit, if you will to distribute.

But other clearing organizations are privately held, and people choose to participate in them, notwithstanding the fact that there is not an identical interest among the shareholders of the clearing organization and the participants in the clearing process.

One doesn't necessarily work any better or less well than the other, and I don't think you can say that moral hazard is avoided by one to the extent that it isn't avoided by the other. But certainly, moral hazard and one of the key issues of extending that clearinghouse guarantee beyond the direct participants in the clearing process is the issue of moral hazard, all right?

If I can gain those benefits but I don't have to observe the discipline that the clearing member has to observe, and I don't have to have my capital on the line,

that certainly would be a case of moral hazard, and, from my particular view, not a good thing.

CHAIRMAN NEWSOME: Commissioner Brown-Hruska, any questions.

COMMISSIONER BROWN-HRUSKA: Thank you, Chairman Newsome, for your questions, and also it's good to see my fellow commissioners here and finally get to meet you.

The key point that I kind of kept ringing in my head during your presentation, John, was this issue of standardization. It seems to me that over-the-counter markets, that's the point, they're not very well standardized, and we don't want to, by choosing a clearing model, necessarily force markets that are not conducive to standardization, to accept that model.

But in thinking about the clearing models and many of them that I have seen, they are very -- there are different versions, different types that allow for different degrees of standardization. There are, for example, when we see in futures markets, we see discount factors that we can build into contracts, or factors that allow us to adjust the prices to account for differences in contract terms, for example.

e.

So I can see models in which over-the-counter markets can be cleared without rigid standardization kinds of features. I think it's certainty of contract terms, agreement among the counterparties that's very much --

that's very important, and that we not confuse that with standardization.

Somewhere embedded is a question. That is, do you think that standardization, for example if we have -- in a sense that if you view a clearing sort of exchange clearing model as a most standard type of sort of model, and then you could go to the other type of model which allows -- which integrates a sort of transparency of counterparties where, for example, you can see, for example Intercontinental Exchange has the levels of counterparty sort of based on their credit quality and where you can identify.

So you can kind of choose the level of counterparty risk that you are willing to accept. So there are some levels of the clearing model that we're talking about, the exchange model, which really tries to eliminate counterparty risk.

On the other extreme, there's the possibility of assessing counterparty risk and taking some of that on, knowing that that will lower your cost of mitigating counterparty risk.

Do you see sort of a continuum of possibility of different types of clearing models that could adapt well to the over-the-counter markets, the likes of which we're talking about here?

MR. DAVIDSON: That's a very complex question, actually. It is certainly the case that even the exchanges who are best known for highly standardized products are moving in the direction of less standardized products, and still having those products be cleared.

So, in the securities world, the most common cases are the so-called LEAPs contracts, the long-duration options contracts where there's a certain amount of customization available, and a number of the futures exchanges have similar innovations.

I would argue that in the world of over-the-counter derivative products, there are a fair size subset that are essentially standardized or plain vanilla. The plain vanilla interest rate swap market for most of the large providers of sovereign debt in the world is a pretty standardized market, notwithstanding the fact that it's not universally cleared yet.

On the other hand, there are certainly some very complex interest rate derivative products that would not lend themselves to clearing.

I agree with you that the certainty of contracting terms is the most important characteristic of the ability to impose clearing or interpose, perhaps is the more polite word, clearing in any marketplace. There is, however, a risk associated with simply having clarified

terms of trade. Again, it's more a function of how you have designed the clearing organization, than it is inherent.

Those products that are highly standardized are typically -- it's easiest to understand how they are going to be particularly liquid. And that means that the clearing organization has the ability to liquidate a defaulted member's obligations in a short period of time with a high certainty as to what price is going to be obtained.

Those products which are less standardized, but which there is still contractual certainty as to what the particulars being transacted are, are less likely to be exceptionally liquid, and consequently, there is more risk in price movement associated with the clearing organization's liquidation of those contracts in the event of a failure of a clearing member.

That's not an inherent problem, as long as the clearing organization recognizes it up front, and sets collateral valuation, collateral haircuts, mark-to-market policies, and finds agreed-upon prices that actually reflect the probable liquidation points.

But there is a greater amount of uncertainty with respect to their ability to do that than there is with a highly-standardized, actively-traded product.

Can I conceive of a product which is not particularly standardized, but there is certainty in terms

of trade, that is, notwithstanding all of those things, still easily liquid in the clearing organization going to be able to close out in a stressful market condition? Yeah, I can conceive of that, so I don't think it's an inherent limitation, but I think one has to be very, very careful in the design of a clearing organization for less standardized products, and how the operation of what that guarantee is, and what the default procedures and default resources are.

And so you may want to, for example, make participation in the risk mutualization for those products different than participation in the risk mutualization for the more standardized products.

People may be less willing to put their capital at risk to the expertise of a clearing organization in those situations than for more standardized products. I hope that's responsive.

COMMISSIONER BROWN-HRUSKA: Yes, thank you.

MS. THORPE: Thank you very much.

I was going to refer to you as Dr. Davidson after your excellent presentation, but I gather now you must feel like a doctoral candidate defending your dissertation, after the questioning.

(Laughter.)

MR. DAVIDSON: Both my parents are Ph.D.s, but that is not a distinction I can claim, I'm afraid.

MS. THORPE: Okay, well, we are now left with half an hour, unfortunately, to get through two more presenters. Ananda Radhakrishnan is a Special Counsel in the Division of Clearing and Intermediary Oversight at the CFTC. He joined us recently from the CME Clearinghouse Division and he will talk about the CFTC's oversight of clearinghouses. Thank you.

Ananda.

MR. RADHAKRISHNAN: Thank you, Jane.

Chairman Wood, Chairman Newsome, Commissioners, ladies and gentlemen, what I'd like to do this morning is to provide you with a broad overview of how the CFTC regulates derivatives clearing organizations or clearinghouses. And I do have a slide show here.

(Slide.)

MR. RADHAKRISHNAN: As Chairman and Newsome and Jane alluded to in the opening remarks, the CFTC now has direct authority to regulate derivatives clearing organizations and this was a result of the passage of the Commodities Futures Modernization Act of 2000.

The clearinghouses that have to register with the CFTC are those that seek to provide clearing services with respect to futures contracts and options on such futures contracts and options on such futures contracts. And they have to register before they can begin to provide clearing

services to those markets.

This is a new requirement, and it is imposed by Section 5(b)(a) of the Commodities Exchange Act. DCOs that are not required to register may nevertheless voluntarily register with the CFTC.

There are certain exceptions to the registration requirement. Specifically, if a clearing house was grandfathered into DCO status at the time of the passage of the Commodities Futures Modernization Act of 2000, then they are not required to specifically register; they are deemed to be registered, and there are eight DCOs which were grandfathered into DCO status.

Secondly, if the futures contract or options contract that the clearinghouse seeks to clear is either excluded from the Commodities Exchange Act or is exempted by the provisions of the Act, then the DCO that seeks to clear those sorts of contracts are not required to register as DCOs. They may do so, but they are not required to register.

And then, finally, if the futures contract or option contract that the clearinghouse seeks to clear is a securities futures product or single stock futures product, and the clearinghouse is a clearing agency that is registered with the Securities Exchange Commission under the Securities Exchange Act, then it is not required to register

as a DCO with the CFTC.

Let's go to the next slide.

(Slide.)

MR. RADHAKRISHNAN: As Jane Thorpe and Chairman Newsome alluded to, to obtain registration and to maintain registration as DCOs, they are obliged to comply with 13 core principles that were laid down by the CFMA and are part of the Commodities Exchange Act. I'm going to quickly run through the basic elements of these core requirements:

First of all, they must have adequate financial, operational, and managerial resources.

They must have appropriate standards for participant and product eligibility.

They must have adequate and appropriate risk management capabilities. They must be able to complete money settlements on a timely basis.

They must have standards and procedures to protect member and participant funds, and they must have efficient and fair default rules and procedures.

They must have adequate rule enforcement and dispute resolution procedures.

They must have adequate systems safeguards, emergency procedures, and a plan for disaster recovery.

They have the obligation to provide necessary reports to allow the CFTC to oversee their activities.

They must maintain all business records for five years in a form that is acceptable to the CFTC.

They must publicize their rules and operating procedures.

They must participate in appropriate and applicable domestic and international information sharing arrangements.

And they must avoid any action that is deemed to be an unreasonable restraint of trade, or that might impose an anticompetitive burden on trading.

The CFTC has the responsibility to oversee DCOs to ensure continued compliance with these principles, and also with the relevant provisions of the Commodity Exchange Act and the regulations of the Commission.

And as part of the CFTC's efforts to provide guidance to DCOs, to ensure compliance with Commission regulations, in November of last year, the Division of Clearing and Intermediary Oversight issued an advisory concerning the efforts of DCOs to publicize the benefits of clearing, in general, and through specific benefits, in particular.

The advisory pointed out that any marketing or similar statements that materially misrepresents the credit enhancement that is provided in connection with the clearing of a transaction or by a DCO, including the nature of the

clearing guarantee provided, or the financial resources that support that guarantee, could raise issues under CFTC regulations.

The advisory further pointed out that any statement that asserts that any DCO or any clearing service provided by the DCO has in any way been sponsored, endorsed, or otherwise recommended by the CFTC, may also raise issues under CFTC regulations. Next slide.

(Slide.)

MR. RADHAKRISHNAN: Who can clear? First of all, I'd like to talk to you about the organizational structure of clearing houses. A clearinghouse can either be an operating division of an exchange, and there are some examples of that; it could be a subsidiary of an exchange, or it could be an independent entity that provides clearing services for a particular market.

There are currently 13 DCOs registered with the CFTC, and these are, in alphabetical order, the Board of Trade Clearing Corporation; Brokertech Clearing Company; CME Clearinghouse; the EnergyClear Corporation; the Guarantee Clearing Corporation; the Intermarket Clearing Corporation; the Kansas City Board of Trade Clearing Corporation; the London Clearinghouse; the Minneapolis Grain Exchange Clearinghouse; the New York Clearing Corporation; NYMEX Clearinghouse; the Exchange Clearing Corporation; and the

Options Clearing Corporation.

And you will be hearing from some of these DCOs in the next panel. And that concludes my remarks. Thank you.

COMMISSIONER BROWNELL: Who is exempt? You talk about exemptions, and I think you might have even said that there are six categories of exemptions? I'm not sure if I heard you say that.

MR. RADHAKRISHNAN: From registration?

COMMISSIONER BROWNELL: Yes.

MR. RADHAKRISHNAN: Okay. First of all, they were grandfathered. They do not have to register; they are deemed to be registered.

Secondly, if the contract that they are seeking to clear is either excluded from the Act or exempted by the provisions of the Act and all they are doing is clearing those contracts, then they're not required to register.

COMMISSIONER BROWNELL: What kind of contracts would those be? Could you just be a little more specific?

MR. RADHAKRISHNAN: I believe, if I am not mistaken, contracts that have an infinite supply, if I'm not mistaken, or some of the energy contracts, if I'm not mistaken.

There is a whole list of contracts that is mentioned in the Act, but these are two examples. If they

seek to clear those contracts, then they are not required to register.

And then, finally, if all they are clearing is securities futures products, and they also happen to be registered with the SEC, then they don't have to register with us.

MS. THORPE: Okay, then why don't we go next to Mike Gorham, who is the Director of the Division of Market Oversight. Mike?

MR. GORHAM: Good morning, Mr. Chairman, esteemed Commissioners. My job at the CFTC is to oversee the group that has major oversight over the exchanges in the U.S. We actually have, at last count, 11 exchanges that we oversee, and something like 288 different products.

And that 288 actually does not include the new wave of the newest innovation in futures, which is futures contracts on single stocks. There are probably about a hundred of those, at least, that have now come into our bailiwick, as well.

In terms of market oversight, we have three basic functions that we carry out at the Commission.

(Slide.)

MR. GORHAM: The first, as you can see on this slide, is a group of economists and lawyers that we call the Market and Product Review Section. These are really the

gatekeepers in terms of market oversight.

New exchanges that come in have to have their rules approved by this group. New Exchanges bringing new products or existing exchanges bringing new products or existing exchanges modifying their old products, have to get through this gate coming in.

It's much easier than it used to be under the new Commodities Futures Modernization Act, and in many cases the exchanges can simply self-certify that their products are in compliance with the relevant core principles, without having to come in with huge documentation at the time.

This group, this gatekeeper group, really asks two questions of the exchanges: First, is the market properly designed? In other words, are the rules in place to comply with the -- have the market comply with our core principles? Secondly, are the products properly designed, the same thing, in compliance with core principles?

The other two functions you see on the chart, market supply and market surveillance. This is ongoing oversight that we do on markets that have already gotten through the gate.

The question that's asked by our market compliance group is, are the exchanges enforcing their rules? The question that's asked by the market surveillance group is, are there signs of an impending manipulation or congestion? And in just a second I'll get into the difference between those two.

So let me go through each one of these very quickly. The question of whether the market is properly designed. The issue there is, have the exchanges adopted rules in order to ensure that the core principles are met?

There are more core principles than I have on this slide. I just wanted to sort of get this to a reasonable number. But there are things like do they have regulations to protect market participants? That's one of our major concerns, to protect market participants from fraud and other kinds of abuse.

With respect to the trading system itself, is the trading system fair and equitable? In other words, are there systems in place that ensure that everybody has access to the best and fair price? For example, in electronic trading systems, the typical protocol is to give price and

time priority to traders that come in. If an exchange has any other algorithm besides that, they have to come in and explain how that -- why that still is a fair algorithm.

The core principles require that the exchanges must on a daily basis disseminate market information. It's a pretty mild requirement actually, because it really simply says that you have to produce end-of-day information on volume, on open interest, on prices. In fact, all of the traditional exchanges go far beyond that. They essentially produce real time information as they go through the day.

And then there's a set of administrative issues that we look at when we look at the design of the marketplace. Is there financial integrity in the transactions? And this really speaks to a lot of the clearing stuff that you'll be dealing with today: Minimum financial standards, proper margining systems, et cetera.

Are there effective compliance and disciplinary programs? In other words, are the exchanges able to find people who are violating the rules, and are they able to discipline them in an adequate way?

Governance. Has the exchange set up a board of directors in a way that has appropriate fitness standards so that you don't have someone sitting on the board who has a record of serious violations? Is there a system in place to prevent conflict of interest when boards or committees are

making decisions?

And finally, is there adequate recordkeeping at the exchange so that the exchange itself or the commission can go back and audit and look at a good audit trail to figure out what was going on?

When we move to products, we have general oversight over the products, from the point of view of ensuring that these contracts that are traded serve the basic economic functions of managing and assuming price risk and creating price discovery.

But when you look at the core principles, it's interesting that there are really only two core principles that speak to our overview of these contracts, not that you care that it's Core Principle 3 and 5, but Core Principle 3 essentially says contracts cannot be readily susceptible to manipulation. Core Principle 5 says that the exchange must use position limits or position accountability in order to reduce the potential threat of manipulation.

So both of those core principles speak to manipulation. So that tells you something about how important the issue of manipulation was to Congress in this issue.

Turning to compliance, how the exchanges are enforcing their rules, there are two basic programs that we have in our compliance section. The first one is what we

call rule enforcement reviews. These are just done on a routine basis. We go into the exchanges, into our 11 exchanges, oftentimes several times a year, for various -- to audit them or review them to make sure that the exchange is enforcing its rules. For example, do they have market surveillance systems in place and are they utilizing them properly so that they can detect and deter manipulation?

Are the governance rules being complied with? Do they have representative governance? Do they have sufficient conflict of interest protocols?

With respect to trade practice investigations, we actually go a bit farther. The exchanges on a routine basis give us all the data from their trading days, all of the transactions data. We look at that data to ensure that there are not violations of our regulations and of the exchange rules. For example, a broker cannot trade ahead of its customer.

If a broker has a big order, it might be attractive for them to take a small position themselves in the same direction before they execute the customer order that would cause the price to move up or down, that's a violation of our regulations and exchange rules. And by looking at the data itself, you can look for cases of that occurring. The exchanges do this, but we also do this as well.

Turning finally to manipulation -- sorry, to market surveillance, which is almost synonymous with manipulation. The goal of the surveillance group is essentially to detect and deter manipulation and market congestion. And let me just clarify the difference between those two.

Market manipulation is a case where you have one or more large traders, generally on the long side of the market, holding a position that's larger than the short side can find deliverable supply to honor the commitments. The difference between that and congestion is, congestion is sort of an unintentional manipulation.

You could have a case where there are a number of traders on the long side of the market, each with their own legitimate and independent reasons for standing for delivery, but the amount of supply available to honor those positions is not adequate. I mean, probably one of the best examples of this in the traditional markets are pork bellies. Pork belly supplies can drop to very small levels at various times, and you've got to be very careful to make sure that there are not more positions on the long side of the market than can really be satisfied.

Either one of these, market manipulation or congestion, create what we call an artificial price. In other words, it moves the price away from what the actual

market would be. And in those cases, there are a lot of people that are damaged in the process.

So our own chairman has often pointed -- has urged me to make sure that we do the best possible job we can in terms of market surveillance, because it's so important to our role.

Finally, with respect to market surveillance, how do we do it? Well, I'll just give you a couple of quick details. We basically have a market monitoring process, and then we have a process for dealing with the problems that do arise. Under market monitoring, we have ongoing market intelligence gathering. We have a number of -- I think we have 47 economists and others and support people who are working on this who are constantly talking to people in the marketplace, reviewing market publications, et cetera, to have a good grasp of what's going on in the market.

Then with that background, they use three basic tools. The first one is actually the envy to regulators worldwide, and that is our large trader reporting system. Large traders who have positions above a certain target level have to report on a daily basis what the size of their positions are. So we're able to look at these positions, and we're especially concerned as you move into the delivery period. We know when we look at these traders, are they able to take delivery or to make delivery. What have these

particular entities done in the past. There are a lot of things that we know about them.

The size of the positions may be troubling or may not be, depending upon what the deliverable supply is at the time. The deliverable supply in any commodity is influenced by weather and a number of other seasonal and cyclical factors. So you could have a situation where you had a number of traders with very large positions, but it's really not a concern because the deliverable supply is quite large. In other cases, it's just the opposite. You may have serious concerns.

So we look at that relationship and at the same time we look very closely at the price of the expiring futures, and we compare that price to other relevant prices, prices of the other months of that same contract, and to various cash prices. So if we see a potential problem with respect to deliverable supply in the positions, and at the same time, we see that price moving out of line from its traditional relationships, that tells us that we have a problem.

So what do we do? Well, there are set of things, a set of actions that we or the exchanges can take. And I've actually been speaking as if we're doing all this ourselves. The exchanges are self-regulatory organizations, and they're doing the exact thing. And in fact, when it

comes to dealing with problems, it's often the exchanges that are taking these actions.

(Slide.)

The first thing that we do, it's called jawboning on the slide. That may or may not be a popular term, but essentially what it means is informal discussions and oral warnings.

If that fails, the next step for us is actually sending a warning letter -- I should say the jawboning generally deals with almost all the problems that emerge. If you have to go to a warning letter, and it's not very often that we do that, then essentially what we're doing is instructing the trader that they need to get out of the market.

We explain the situation. We say they have to get out of the market, and if in fact a manipulation is deemed to have occurred, they could be implicated in this. Almost always, that does the job.

Finally, there's emergency action that can be taken either by the exchange or by the Commission. We can do things like increase margins. In fact, there was a case just two years ago when palladium margins were increased by the exchange to over 100 percent of the cash value of the commodity.

We or the exchange can change delivery terms.

There was a case in coffee a few years ago where we extended the delivery period because there was a problem in getting all the deliveries done.

We can have forced liquidation. We can essentially tell everyone to reduce their positions down to lower levels. We can have trading for liquidation only, which means no one can put on new positions. Any trade anybody engages in is only for the liquidation of an existing contract.

And finally, either the exchange or we can close trading, and I'm not sure if this is the case, but I think that John probably was head of the clearinghouse back in 1985 or so when the Mexican government put on capital controls that essentially prevented funds flowing across borders for anything other than merchandise trade. And what that meant is that anybody holding a Mexican peso position could neither take nor make delivery, and the exchange essentially had to cease trading. Is that true, John?

(Mr. Davidson nods in the affirmative.)

MR. GORHAM: And I told Jane that I could do this in 12 minutes if necessary. Oh, the bottom line. Sorry. Just to summarize.

(Laughter.)

MR. GORHAM: What market oversight at CFTC is about is basically making sure that we have properly

designed markets, properly designed products, that we make sure that the exchanges enforce their rules, and essentially that we do everything we can to stop any potential manipulation in its tracks.

Thank you.

MS. THORPE: I would like to elaborate on something Mike has been talking about and relate it back to something that I said during my opening remarks.

The entire construct that Mike Gorham was speaking about is one that applies to a regulated futures exchange. And there is a price to being a regulated futures exchange. Congress determined that regulated futures exchange serve a national economic purpose. They are important for price discovery. They are important because retail participants can participate on those markets.

The CFMA basically made a decision that, depending on the nature of the participant and the nature of the product, the product being that it is a deep liquid market, not readily susceptible to manipulation, that you could have markets that are participated in by sophisticated counterparties that do not need the construct that Mike was talking about.

And one of the markets that will be speaking this afternoon is the InterContinental Commodity Exchange. So all of the rules and regulations and the oversight the CFTC

applies to the Chicago Mercantile Exchange, to the Chicago Board of Trade, for example, is one that Congress has determined need not apply to a marketplace that is participated in by sophisticated counterparties.

CHAIRMAN NEWSOME: Okay. Thank you, Jane. Mike, Ananda, I thank you very much. Pat had to step out for a few moments, so do commissioners of either agency have questions of any of the panelists?

COMMISSIONER MASSEY: I have a couple of questions. On your slide, the house slide dealing with problems, jawboning, warning letters, emergency action, how transparent or public are your processes? For example, if you send a warning letter, is that in the public domain or is that done privately?

MR. GORHAM: I'll tell you what I believe and then I'm going to look at my surveillance deputy director who is sitting behind me. The jawboning absolutely is not public. The warning letters I don't believe are public either.

VOICE: No, they're not public.

MR. GORHAM: They are not public.

COMMISSIONER MASSEY: The emergency action is definitely public?

MR. GORHAM: It's hard to miss.

(Laughter.)

COMMISSIONER MASSEY: Yes. I'm really quick in that respect. I pick up on this.

(Laughter.)

COMMISSIONER MASSEY: Now when you say one of the issues is whether there are any limitations on the deliverable supply in the market, are you saying in the actual physical market?

MR. GORHAM: Correct.

COMMISSIONER MASSEY: So you, in looking at whether the derivative market is functioning well, you would look at whether the physical market is functioning well too?

MR. GORHAM: It's really a combination. I'll give you a quick example that we've just dealt with recently. There's been a cattle contract for probably 30 years traded at the Chicago Mercantile Exchange. That contract specified a particular weight of cattle. Over time, the weight of cattle going to market have been getting heavier and heavier. The contract was not changed quickly enough to reflect those increases in weight, and so what that really meant is that when it came time to satisfy the terms of delivery and the shorts would look around -- they would look at their own cattle in their own feed yards to try and make delivery -- a smaller and smaller proportion would be fit for delivery because most of them were too heavy.

That's a case where you started to get a shrinking deliverable supply because of a bad design of a contract. So it doesn't necessarily mean that there were fewer cattle in the market. It just meant that there was a mismatch between the contract terms and the commercially available supply.

Because of that, the exchange did what we believe was exactly the right thing. They reduced the speculative position limit in sort of a quick fashion, and then came back later and changed the contract so it was much more reflective of what was actually traded in the market.

COMMISSIONER BROWNELL: You talked about the exchanges being self-policing. So are the majority of problems that are identified, identified by the exchanges themselves?

MR. GORHAM: Absolutely.

COMMISSIONER BROWNELL: Okay. And so your audits -- they know you're coming, so they tend to audit themselves before you get there?

MR. GORHAM: They do that. And we also work very cooperatively with them, so if they perceive a problem that they're dealing with, we're on the phone continually regarding this problem. So the exchanges don't keep anything from us.

MS. THORPE: The requirement is not at a point in

time requirement. It is an ongoing, continuous requirement that our exchanges have to be in compliance with our rules and regulations.

CHAIRMAN NEWSOME: Commissioners, any questions or comments you'd like to make?

(No response.)

CHAIRMAN NEWSOME: Okay.

MR. HEDERMAN: I have one question.

CHAIRMAN NEWSOME: I'm sorry, Bill.

MR. HEDERMAN: If a solution provider represents that it is a clearing member or represents it has some other guarantees, what is the best way for a potential customer to verify what he's hearing?

MR. DAVIDSON: Well, all of the clearing organizations, at least I'll say all that I'm aware of, publish largely on the Internet the list of their clearing members. So that's a relatively straightforward process to go and validate that they're a clearing member.

I think fundamentally that a customer or an end user needs to satisfy itself with the financial condition of someone it's choosing as an intermediary, and if it can't, it ought to go somewhere else. So looking at reports from credit rating agencies is one thing that might be done. Requiring a copy of audited financial statements is something that might be done. Asking for specific financial

information. All of those things are very important in choosing among intermediaries.

And certainly if you find someone that's misrepresenting those things, then as a regulated entity, you ought to let that be known to the regulator of that entity. And if it's not a regulated entity, you probably ought to be let it known to other participants in the marketplace that that entity did that thing.

MS. THORPE: And indeed, it was for the very issue that you raise that the CFTC issued the advisory that Ananda referred to during his presentation, which basically was the first time that this agency had ever issued any guidelines regarding advertising or marketing by clearing organizations. We have never had the situation because of what I had said before, the one-to-one relationship between the exchange and the clearing.

Now we have essentially the de-linking. Markets are separate from clearing. We now have clearing organizations that are out there competing for the business of the various OTC participants. And as a result, there is a great perhaps desire to exaggerate somewhat some of the protections that may be available. Not necessarily that that was what was happening, but we believed it was very important that any information that is put out there by clearing providers be accurate, be not misleading, and be

not misrepresentative of their status as being regulated by the CFTC.

COMMISSIONER MASSEY: Chairman Newsome, I have one more question. The concept of a clearing organization, did that arise because of a hue and cry in the industry itself, or a hue and cry among the regulators? Or both? In other words, do you know that a particular industry or market is appropriate for a clearing organization when the market participants themselves begin to desire it and form it? Or how do you look at that?

MR. DAVIDSON: That actually -- I think the best case is the one you just described. That is to say, the key participants in the marketplace get together and organize themselves and create a clearing organization, or a provider of clearing services comes to a marketplace and convinces a substantial number of the participants in the marketplace that they can add something in the way of integrity and efficiency to the marketplace.

Historically, there certainly have been hues and cries related to the creation of clearing organizations. If you go back in history well before the creation of the Commodity Futures Trading Commission to the 1920s, you can read in the Congressional Record quite a bit of hue and cry about the clearing situation at the Chicago Board of Trade with respect to the grain markets, and that very hue and

cry, which got to the halls of Congress, resulted in the creation of the Board of Trade Clearing Corporation in 1925 as an independent clearing organization for those very important markets.

So hues and cries have occurred, but I would say it's voluntary action by market participants that's the optimal way that you can have a clearing organization arise.

CHAIRMAN NEWSOME: Okay. Before we recess for lunch, I wanted to thank this first panel. Your responsibility and job was to lay the groundwork both from a regulatory and a structural standpoint for the panels this afternoon, and I think you certainly have done that. And again, thank you very much.

Commissioner, do you have an announcement?

COMMISSIONER BROWNELL: Thank you. We need to go back and study I think a little bit more. We really appreciate your contribution. The speakers and our colleagues at the CFTC are invited to the 11th floor in the Commissioners' library for lunch. The rest of you may enjoy the culinary masterpieces at the Sunrise Cafe.

CHAIRMAN NEWSOME: And we will reconvene in one hour.

(Whereupon, at 11:41 a.m. on Wednesday, February 5, 2003, the Technical Conference recessed, to reconvene at 12:50 p.m. the same day.)

## A F T E R N O O N   S E S S I O N

(12:50 p.m.)

CHAIRMAN WOOD: Welcome back and Jane, we'll give her back to you again. Thanks.

MS. THORPE: Thank you very much, Chairman. I've been advised that unless the speakers speak directly into the microphones, that it's very hard for the people in the audience, especially those sitting in the back, to hear. I do have my microphone on. Can you not hear? Can you hear now?

VOICES: No.

MS. THORPE: No. Okay. How about now?

VOICES: Yes.

MS. THORPE: So for all of the panelists speaking today, please make sure that your microphone is on. It can be all on at the same time I understand without interfering with each other, and try to speak as directly into it as possible so that everyone in the room can hear you.

As I said this morning, panel two, organized by the CFTC, consists of markets and clearinghouses and what we've done is to organize it in such a way that we go from presentations from an OTC market to a regulated market to a market that is both an OTC market and a regulated market, and then talk about various clearing services provided in varying degrees of purity, and as they complete the

presentations you'll understand what I mean about the purity bit of it. But I'd like to start with David Goone who is Senior Vice President of the Intercontinental Commodity Exchange. David?

MR. GOONE: Thank you Chairman Wood, Chairman Newsome and Commissioners for having us here today. My name's David Goone. I'm a senior vice president at Intercontinental Exchange and I'm in charge of product development, one of which is coming up with our clearing alternative, I shall say.

I thought what would be productive for us today is to give you a quick outline what I want to try and get done in a very short period of time. A brief overview of what the Intercontinental Exchange is for many of the people here, to give a quick overview of what we do now, an overview of how we facilitate OTC clearing, kind of just where we stand with it and a quick summary and questions.

Intercontinental Exchange is an electronic trading system. We are what was referred to a little bit earlier in the morning session as a professional market, what's called an exempt commercial market under the CFMA where it is a principal to principal market for -- lots of acronyms -- for ECEs, which are eligible commercial entities, and it's a principal to principal marketplace which has been very successful. I will show you the system

shortly. We provide OTC clearing conduits, we clear OTC products as defined by us through two clearing organizations at this point in time, which are making presentations later.

We also own a futures market, a fully regulated market, though not in the United States. We own it in London. It's called the IPE or International Petroleum Exchange, and it trades oil and gas primarily in the U.K. and throughout Europe.

We also have another group called Econforms. That's automated post trade processing. Mr. Davidson referred to a little bit of the things we can do up to but not clear, and these are some of the things we do with Econform which is true straight through processing from trade to legal confirmation. A process that in the past could take one to several days, up to a week at times, is done now automatically for the participants in there.

We also own a market data information wholly-owned called Tanex. We have over 650 companies, about 6,000 what we call active participants. We trade 600 plus commodities and derivative contract types, primarily crude oil and products, natural gas, power, precious metals, weather derivatives, omission allowances and even call.

I say 600 plus. It's hard to keep track on the ICE system, as we're a digital platform and we can add products literally on a overnight basis. One thing we are

not, we are not a clearinghouse, we are a conduit. We define the products in conjunction with a clearinghouse but we do not guarantee the trades nor provide any of the services that Mr. Davidson referred to in his overview of the clearing of markets.

We are also not an exchange in the traditional sense of many of the DCMs or regulated exchanges. We don't have membership dues or so-called "seats" as they call them. We simply charge a transaction fee for the participants coming to our screen. We're an electronic marketplace and we get remunerated for the transactions conducted on the exchange.

It's hard to see -- I know I was sitting in the audience -- but I thought I'd show you just a screen shot of ICE, and as I saw the screens here, I kind of rued the inclusion of this. I know I have a black and white copy to it's hard to see for the Commissioners.

What I'd like to just point out here is that this is what an ICE screen looks like. It's broken down into simple products. Each line in the top left hand corner is the products that we clear or that we trade on ICE. There's a sell quantity on the bid offer and a quantity on the offer as you go across into the middle section.

What I really wanted to show in this slide is that we are about market transparency. We show every price

in the market, not the best bid, not the best offer, but every price that is submitted into the marketplace. So if it's a \$31. bid in crude oil, and there's a \$30.90 bid behind it, we show all of those bids and offers in the marketplace. And you can expand the marketplace to see all bids and offers.

As I'll explain later, you will also see not only bilateral but all the cleared markets we do as well.

Just a quick overview of the marketplace. At the bottom you see a ticker. Everything's real time. We even calculate, hover the mouse on our last price, we show the high and low calculated real time with a volume weighted average price which is used in many marketplaces, which is also calculated real time as the trades occur.

Just an overview of why we got into OTC clearing and I won't spend very much time on it. Multilateral netting was gone over fairly well this morning. It also saves a lot of legal documentation. We have found, and I'm sure people in this industry see it as well, is just setting up counterparties, even with good credit, takes a lot of legal time and costs. As we get into a cleared market, there's a standard contract typically, as discussed earlier, that everyone has to agree to or not abide by. There's no back and forth, well I don't like this provision or I don't like that provision. It's one document, it's a universal

document typically; everyone signs and it greatly reduces legal time and costs therefor.

We believe it greatly reduces risks as a four or five-year position has now become a series of one-day mark to markets, so while I might not extend somebody five years of credit, and we can see this on ICE quite readily, you might be very comfortable extending them 30 days or six months of credit.

And what clearing does just in general is shorten a five-year or a two-year position down to one day's risk because you're squaring up everyday with respective clearinghouses in terms of what you're dealing with your counterparty increases liquidity. We have found traditionally -- I shouldn't say in all cases -- but traditionally when clearing has been added to the markets -- and I also am a former CME alum -- and the markets we added clearing to also greatly reduced -- increased the liquidity of the market in general. Can't say it happens all the time but in most cases it does.

It does bring in new players and that gets back to the issues of the clearing firms now are guaranteeing in the models we use the customers, and they can bring in a lot of new players. Just recently, the CFTC expanded who was eligible under the eligible commercial entities to trade on ICE to include all registered with the CFTC, floor brokers

and traders as well who also have direct access to the respective U.S. futures exchanges. It standardizes daily marks.

A lot of times we see in some of the esoteric products traded on ICE, people bickering after the trade's done about what the mark was for that date.

In the over-the-counter markets, especially when you get to less standardized products, plain vanilla products, people don't always agree on the value of that product at the end of the day. When clearing is introduced, there's a daily mark set by the clearinghouse which eliminates that problem. It also levels the playing field.

The lower credit rating has the same in a cleared market and you'll see on our screen the same chance of getting traded as a higher credit rating.

It levels the playing field and it also, in our opinion, adds liquidity to the marketplace. What we say is it adds more white prices. On ICE we show all prices, even those you cannot transact with. And I'm going to show you the credit screen which is really the heart or the engine of the ICE system or the Intercontinental Exchange System.

(Slide.)

More white prices means tradeable prices. We show every price on the screen so whether I have good credit with a counterparty or not in the bilateral world will

depend on what the color of the price is. If that \$31 bid I referred to earlier was with somebody our credit people have set up on the ICE system is open with, and they've set us with open, so we have open credit with each other, that price will appear as a white price, and therefore that is a price I could actually trade on. Technology-wise it lets me trade it.

If it is somebody who does not have credit with me or I don't have credit with them, that price is a red price. We still are all about market transparencies so everyone sees all the prices. It's just certain prices you can transact on. When we had clearing, we get what you call more white prices, more transactable prices.

What's unique about our model is we use existing products, typically liquid ones, and offer the option of clearing on top of the normal matrix of credit relationships you define in the ICE system. We call it being done in the same price stream. So with clearing, I can have one counterparty who I have a bilateral relationship with, will see that \$31 bid as a white price. Another counterparty who I may not even know, who has a clearing relationship and I have a clearing relationship, and they will see that \$31 bid as a cleared price. They will see that \$31 print as a white price. When they transact it, we'll show you a couple quick differences but they can transact on that price. That's

what we believe is unique in the ICE system is the same price stream. So we've taken a liquid market and just added one further layer of credit enhancement which is that of clearing.

As mentioned on the slides, if they have a clearing relationship, they'll be able to trade it. If not, they'll just see the price and will not be able to trade on the price.

(Slide.)

In the next slide I talk about our model was to partner with an existing clearinghouse. We didn't have the time nor the wherewithal to do or chose to do all the steps involved in all the morning presentations. We decided to be a conduit with existing clearinghouses who have very large memberships and that would be the London Clearinghouse, and the GCC, which is a wholly-owned subsidiary of the Board of Trade Clearinghouse, both of which will be giving presentations.

We use FCMS or Futures Commission Merchants, as intermediaries, and John explained that very well. The counterparties of participants on ICE is their clearing firm, so x, y, z clearing firm, when I transact a trade is who will be my counterparty on that trade in fact, not ABC energy company, because that is a straight through process to the clearinghouse.

How do we decide which markets are cleared. I actually wanted to just pause on this and spend a little bit of my time on this. We have chosen what I like to call the 80/20 rule. We tried to clear markets where 80 percent of the volume and therefore risks usually lie and it's usually about 20 percent of the product. I would actually say as we look at the over-the-counter market, it might even be more like a 90/10 rule. And that's how we choose the markets.

It gets over some of the issues talked about when looking at a clearing. You have to have a market that is able to come up with market prices on a standardized basis at the end of the day that there's enough liquidity. I think John Davidson's point earlier was well taken. The hardest thing is to clear a market that trades once a month.

And actually from a business perspective, running a business, that's also a difficult business perspective for us or the clearinghouses to work on that. We of course have the gatekeepers of the risk teams at the respective clearinghouses working with us in the product development, but we usually pick products that are the most actively traded and add those for clearing.

And I can answer some questions later on about a little more detail on that.

We don't charge any differential fee for whether trade is cleared or bilateral. The clearinghouses do charge

a fee and typically the clearing firms charge some type of processing fee as well but from our standpoint, whether a trade is done cleared or bilateral is irrelevant to us. We believe in clearing. If all we did was take one market and if there were a hundred trades in that market and it went just to become a cleared marketplace, we haven't made any money, more moneys than that. So our belief is that clearing actually grows a marketplace. By transferring it to clearing, we will get more transactions and one of the reasons we did it, and like I said before, we noticed in other marketplaces that seems to be the case.

It can be utilized in two ways in ICE. On the ICE screen in the same price stream as I mentioned before, or you can do it as what we call block trade, but really it's a trade done off the ICE electronic system. In other words, I have a trade that has been done with a counterparty, and I want to process it through clearing either to the LCH or GCC. They can call that in or shortly do it electronically on ICE and it'll process right through.

So there are two ways to do it. The first point is the one that I believe is only done on ICE. The second one is the way most -- us and the others are doing it.

I just thought I would show you the real heart of the ICE system with its credit settings. When you get onto the ICE system, the first thing that happens, you get to

see, if I'm Test Company One, which is what it shows on this slide is my company name, I see everyone else in that marketplace how they set me up for clearing. And this usually is accessed only by the credit manager of the institution.

So in the first case, the first company on the left hand side, it's a green light I call it, they have me open for bilateral credit, but I have them closed. I can either choose to open them or close them and set daily limits and how much, you know, \$10 million is what I want to trade with them on the day and get some warning lights, for example, when I reach \$80 million, I can hit a warning light.

And then I also have clearing. We can prefer bilateral or cleared for each other. So in the case of the first instance, they don't have clearing so the only way I can't actually trade with that counterparty.

In the second instance, and this is all done by our credit people and how they want to set up credit with each counterparty, you can set up bilateral is actually closed for me, open for them, and we both have clearing. In that instance I will see their prices as white prices and they will see mine as white prices and can transact.

I should notify everyone that ICE is a post-trade system in terms of understanding who your counterparty is.

It's anonymous until after the trade has been done, and then you find out who your counterparty is. It's an important aspect we think of the marketplace.

(Slide.)

On top of that, we've also built a unique other credit filter which is done by the clearing firms. So as we stated earlier this morning, the risk to the clearinghouse is the clearing firm or FCM that is guaranteeing the trade to the clearinghouse. They have a live on-line system that they can get to and per product they set up what I call a fat finger limit in case the zero key sticks, and there's been several instances of this in the early onset of electronic trading in futures, several of which I'm aware of in my prior employer, where a zero key actually stuck and someone gets a trade done in an electronic world.

We have what we call fat finger limits so you can set, you know, they can't do more than 250 or whatever the quantity, and in the net daily long or short limit. So they can only have a net position one way or another. This overrides everything that's done in the system so when I send a trade out to the marketplace, not only is it checking what my credit manager has told me how everyone should see the market cleared or bilateral, if it's cleared it then goes one step further and checks what the clearing firm is allowing me to do.

The clearing firm is accessed, and these are all safety and procedures we put on above and beyond probably the call of duty in a lot of ways, but this is a way that the clearing firms can come in and disable somebody right away with the click of a button. They have 24-hour access which is unprecedented and they can also see the trades as they happen live, and all they need is access to a computer and the Internet.

The block trading, quickly, it's done between the two counterparties and posted directly to the clearinghouse through an FCM, through us. It can be for creating new trades or moving existing positions to clearing. It can come from any source. It can come from whether it be a voice broker, direct, or even vis-a-vis ICE.

Currently, we don't charge anything for block trading, no fees.

(Slide.)

This is just a quick description of the ICE system. And I'm actually not going to get too much into this. I'm going to move on to the next slide for sake of time.

(Slide.)

We have been doing this successfully. We started net gas and oil trading in March of 2002. We've added UK net gas, and I haven't been talking about the European marketplace, but that was added in September of 2002 where we see on many days about 50 percent of our trade being done cleared. And we've added, at the end of the year, we added U.S. Power, PJM West, and into Synergy, our two most active hubs.

We have about 70-plus companies right now, not participants, but 70-plus companies clearing products on ICE, and we seem to be adding people on a daily if not

weekly basis. We seem to be seeing companies adding. So the word is certainly getting out there.

I would just like to close by saying one thing, which is, we don't believe there's a real silver bullet to all the issues addressing the energy industry. We think clearing is a very good tool, and one we wholeheartedly endorse and believe strong in and it can greatly mitigate many problems. But we don't believe is, I think stated earlier, that you can clear all products. You can only clear a subset. But I think you can greatly, greatly enhance the marketplace with it. But it isn't the panacea. It's not going to solve all the ills of this marketplace.

But we urge you to explore it, ask lots of questions, and I think there's tons of knowledge.

(Slide.)

I think my last slide is just if you have further information, there's so much information out there, not just on us, but on all the solutions. Our Web site is out there at the ICE.com and e-mail's out there.

So anyway, thank you very much for your attention, and I look forward to your questions.

MS. THORPE: David, it might be a little helpful if you just explain your status as an exempt market. Because it is a very different status that the market environment that Mike Gorham described in the first panel.

MR. GOONE: Okay. I call it regulation real lite.

(Laughter.)

MR. GOONE: We are an exempt commercial market, so really where we fall under CFTC jurisdiction is really on the price manipulation and fraud issues. Other than that, it's what I call a grow-up market as defined by the CFMA, which means eligible commercial entities, principals either involved in the business, in the commercial business of these marketplaces, or even hedge funds at certain huge thresholds of capital.

So the professional marketplace is who can trade on it. But from a regulatory standpoint, we only are subject to price manipulation and fraud. Saying that, we do provide lots of safeties and best practices to our system, but none of those are required from the regulatory environment.

MS. THORPE: And indeed, all of the reporting obligations that Mike talked about earlier that regulated exchanges must do on an ongoing basis, the surveillance function that the CFTC applies to regulated exchanges on an ongoing basis does not apply to a market like ICE.

So I think it's very important to keep that in mind as you listen to these presentations that there is a regulated market, it's got the full panoply of market

participants and is subject to all of the regulations that Mike talked about, including all of the rules that my division is responsible for in terms of who can trade on behalf of customers who trade on those markets.

The type of market that David is talking about is a professionals market, subject to less regulation because of the nature of the products and the nature of the participants that are being traded on that facility.

So I think as we go along -- and I think actually in some ways, Bob Stewart, who is next, he's the President of Merchants' Exchange, will be able to shed a little bit more light on what he's subject to as a regulated exchange.

MR. STEWART: Chairman Wood, the other CFTC and FERC Commissioners, colleagues and guests, I guess I'd like to start off by making a few preliminary remarks to set a context for my comments.

Most everyone here seems to be in accord that the benefits of clearing, at least for that part of the market that can be standardized, can alleviate to some degree the credit gridlock that currently exists in the energy industry.

One of the fundamentals that has not been thoroughly reviewed is the fact that today the only avenue into those clearinghouses is through an exchange, some of which are regulated, some of which are not regulated.

(Slide.)

In my comments, I will stress some of the importance and benefits of clearing, but I'll also highlight some of the fundamental differences in exchange structures, since it's the means by which one access the clearing system, and it does impact how effective that clearing system will be for the users of the system.

You'll have to forgive me if in identifying what I consider to be some of the optimal characteristics for exchanges I end up beating the drum a little bit for my exchange, the Merchants' Exchange.

(Slide.)

Going to Slide 2. The benefits of clearing -- and I may be a little bit redundant here, but I think some of this bears repeating -- of course, the reduction of counterparty credit risk through novation, the clearinghouse becomes a buyer to every seller and a seller to every buyer, and the netting of obligations of buyers and sellers across the marketplace.

In addition, I think the variation margin is a very important aspect of managing that credit across the industry and for individual users. And through that system, the reliability of trading and the confidence in the trading systems can be restored to the industry.

(Slide.)

Slide 3. The advantages of trading on an electronic cleared, regulated exchange are numerous. An electronic exchange in particular can protect against trading abuses and manipulation. It does provide a very transparent marketplace. It provides an excellent audit trail, and none of the kinds of abuses that can sometimes take place between human beings are done very easily through an electronic exchange.

The market transparency. Of course, in an electronic market, one can see all the bids, all the offers, so long as the system is designed that way, and see what the entire market looks like.

There is of course trade anonymity, but at the same time that the individual traders are anonymous, the market as a whole is transparent to all users and all interested parties.

Order fills are instantaneous. That time characteristic for an electronic exchange is very important. For many, many users, there's not an opportunity for a user who puts in a market order at a particular time to not know whether or not they got their fill for some extended period of time, or in the worst case, even be informed half an hour or an hour later that the market has moved through them and they just didn't get their fill.

Also in electronic systems, the reliability and

security can be very high.

(Slide.)

Going to the next slide. Some of the unique aspects of the Merchants' Exchange vis-a-vis other exchanges in the United States. First, Merchants' Exchange is what I'd describe as unbiased and independent -- unbiased in the sense that our owners and our ownership and governance structure is not one in which our owners are either traders on the exchange, particularly traders of a particular ilk, who want things to be organized and governed in a particular manner, nor are there significant trading participants who own significant pieces of the exchange and have an interest in having it organized and governed in a particular way.

The timeliness of the fills, as I said before, is very important. It minimizes the slippage, slippage being the movement of price between the time a market participant places an order and tries to get their fill, and when they actually get that fill.

There often can be dramatic movements in price and very costly for the users. That can be reduced but not eliminated.

The systems are secure, very easy to use, and flexible, and most importantly, market participants and all constituents of the market can count on the marketplace being a fair marketplace.

(Slide.)

MR. STEWART: As I mentioned, the independent ownership and unbiased governance, most exchanges in the United States are mutual exchanges. They are owned by, by and large, the trading community, and in most instances, the majority is the group of floor traders.

Even those who have recently de-mutualized, still have their ownership concentrated among floor traders, for the most part. And the other exchanges can -- often are originated and conducted by consortia of significant market participants who, of course, have an interest in seeing the exchanges established and governed in a particular manner.

The governance in a particular manner sometimes can lead to an edge being created for a particular market participant or type of market participant, and, of course, Merchants' Exchanges are set up with the intention to be a level playing field for all comers. Next slide.

(Slide.)

MR. STEWART: We believe an electronic exchange makes use of modern technology to its fullest, and provides the most fair, transparent systems for traders on the exchanges.

There are, as I said before -- it's a perfect audit trail or excellent audit trail, and the opportunities for market manipulation are greatly reduced. Next slide.

(Slide.)

MR. STEWART: We believe the foundation for open and competitive markets is in the rule book. We have established a rule book purposefully with the idea of creating a level playing field, again for all participants, not to preserve advantages for selected traders.

We believe that that, of course, in turn leads to market integrity, so that all users can rely on the system, and know that they have the same opportunity as every other trader with respect to the trading.

Again, we also then have the flexibility to adjust to changes in the marketplace and how things work, as long as those things are appropriate within the rules of the regulators.

Our clearing relationships are arm's-length. We do not have a clearinghouse that is part of the exchange, as many of our colleague exchanges do. And we are able then to have, without any ulterior motives, to have the clearing solution be the solution that's optimal for the traders.

For commercial energy companies that use the clearinghouse, of course, mitigates the problem of the limited credit that's currently possible, but it also free up some of their balance sheet internally.

And novation by the clearinghouses will reduce the counterparty credit risk exposure, as has been discussed

pretty substantially already today.

(Slide.)

In summary, Merchants' Exchange brings relief from the bilateral counterparty credit risk problem. The strong recordkeeping and reporting is, of course, inherent in the electronic systems. The immediate order-fills, financial credibility, reliability, security, and transparency, all of these characteristics lead to improved liquidity in the markets, which, of course, is to the benefit of all market constituents.

I thank you for your time today, and look forward to responding to any questions.

MS. THORPE: Thank you very much, Bob. You've heard from ICE, and you've heard from Merchants' Exchange, and we'll go next to Neal Wolkoff, who is Chief Operating Officer and Executive Vice President of the New York Mercantile Exchange. NYMEX is both a regulated exchange that provides a forum for trading OTC products, and NYMEX also clears both types of transactions. Neal?

MR. WOLKOFF: Thank you, Jane. Thank you, Chairman Wood and Commissioners. My name is Neal Wolkoff. I started with NYMEX in 1981. I have basically a lot of experience, fairly well limited to metals and energy. I missed out on the CME somehow. I don't know how that happened in my long career.

It's a pleasure being here. Prior to that, I should add, I was an attorney with the CFTC. That's how I started my career.

(Slide.)

MR. WOLKOFF: We're on Slide 2. A short disclaimer, and all the disclaimer means is that as of today, to the best of our knowledge, this is accurate. If you see my nose growing and turning into wood, you know that I have said something false.

On page 3, I think it's important that when we're talking about clearing in the energy sector, to have a little bit of background. I know some of this may be obvious, but when you put some of these pieces together, it really explains why this has become such a product of interest across the energy community.

Starting really with the collapse of Enron, prior to that, the most important, significant factor in any energy trade was price. Counterparty credit was, without question, a second item of interest, and a far distant item of interest.

The Enron Online platform became an extremely important part of pricing in natural gas and power, but that was because there was really little or no regard to counterparty credit.

There was an incredible regard to price

transparency, which, of course, is important. What we've seen since Enron has gone under and the Enron Online system has gone under, is that the focus of energy traders has turned, really, from the transparency or convenience of transactions to the counterparty credit issues.

As a result and because of the loss of confidence, certainly across the merchant sector, there's been a loss of liquidity, a reduction in transactions, and I would posit that a reduction in transactions for the marketplace is not ultimately good for competition and is not ultimately good for the interests of the consumer, which is what we're certainly all looking for on a public policy basis. Slide, please.

(Slide.)

MR. WOLKOFF: Thank you. We see that, starting a few months ago, the various rating agencies have officially recognized the need for the energy merchant sector to become much more cognizant of credit risk and to begin using available clearing mechanisms to the extent possible.

Now, a great part of this is not really the interest of the consumer, but, of course, the interest of the investor, and looking out for the capital markets. Now, of course, capital markets are extremely important in the energy industry because power and natural gas are capital intensive. The construction of a generation plant is not

inexpensive.

If the merchant community cannot borrow and cannot reestablish sufficient credit, that becomes a significant issue for the availability of competitively-priced power nationally. Slide 5, please.

(Slide.)

MR. WOLKOFF: Given the focus on credit, you know, I have talked about the freeze, really, in commercial activity in the underlying derivative and cash markets, and I think just statistically, Mr. Hederman had a slide which was very good, and I'm not sure that I'm saying exactly what his slide says, but from their peak, the top ten energy merchants have lost about \$300 billion in market capitalization.

The last available information that was published surveying the creditworthiness of the merchant sector sees that of the top ten natural gas marketers, five have been relegated to junk bond status. Now, these are the companies that are responsible, by and large, for seeing to it that gas, and, of course, power for other energy merchants, is delivered efficiently and as competitively and cheaply as possible.

(Slide.)

MR. WOLKOFF: There are a couple of issues relating to the credit squeeze. We saw in the Enron

bankruptcy that one reason that counterparty risk has become so significant is that parties that have had exposures opposite Enron on both sides of the market see that the money that they had owing to them from Enron is not forthcoming, and yet the money they have owing to Enron is due and payable immediately.

That put a real financial cost as far as your counterparty, and a fear of repetition of that has really created what I have begun to call the six/bid-at-four market. And what does that mean?

That in the bilateral market, you have participants that are so ill suited to transact business with each other that you get marketplaces where you actually have the price that someone is willing to pay over and above the price that someone else is willing to sell for.

And that's not because of a lack of transparency, but because of a lack of credit and a lack of trust. I do think, right now, while I don't believe in silver bullets, I do think right now that credit is such a significant issue that the idea of OTC-called credit for clearing OTC transactions or OTC-like transactions, is, without question, the number one issue in transactions in the power and gas markets, as I see it.

I would very briefly like to give a response to Commissioner Massey's question before. I might answer just a little differently from John, who taught me, after my 21 years, a few lessons in his earlier presentation. It is very commendable that he was able to do that.

But I would say that by eliminating credit risks in markets that are not otherwise liquid -- when credit risk becomes such an issue that it affects liquidity, markets do

become more volatile, because liquidity provides a smoothing of the edges.

You can have a cash market that is extremely liquid, without a clearing mechanism; you can attach a clearing mechanism to that, as John mentioned, in London, and not notice the difference. But when you have contrary-wise, a commodity market, a physical market that loses liquidity and begins to have participants begin to have difficulty in transacting business, straightening that out and taking a six/bid-at-four market and turning it back to a four/bid-at-six market, can definitely enhance liquidity, can enhance transactions, and can limit the amount of near-term volatility in any marketplace. And I think it's shown that that's part of the success of clearing in energy markets.

Now, I would like to probably have my own hour and a half to talk about clearing these transactions, but at the risk of literally nauseating everyone, I will limit it a bit, but I think it's important.

John did make the correct comment, that from the perspective of a customer in the market, assuming the customer is not also a clearing member, from the perspective of a customer, he does not have the benefit of the guarantee fund or the right to receive assessments, but the clearing mechanism is designed to ensure that that customer can and

should have trust in how the mechanism operates.

There are so many processes and steps to that mechanism. David mentioned before, risk is translated into a single day, perhaps less than a single day when mark-to-market is done.

The fact that margins are collected and held as collateral means that even a default by a customer to a clearing member doesn't necessarily mean that the clearing member will default, because he has collateral on deposit to make good on that customer's default.

There are a number of factors; position limits are generally at most clearinghouses and certainly at ours, associated with the capital of the clearing member. Firm can't carry positions; the minimally capitalized firm does not have the same opportunity to clear business as the billion-dollar or more firm.

And at the end of the day, when you look at the bilateral market, if a default occurs between bilateral counterparties, not only is the deal dead, but as I said, in the Enron example, you'd probably wish that it were only dead, as opposed to your half of it living on and their half of it being dead. That's the worst.

In this example, if you see a clearing member going under, albeit, not your own clearing member, your transaction lives on. The exchange continues; there's

business continuity, and that's something that's very important to most participants in the market.

So there is within the structure of the clearing mechanism, which I would add also, is highly regulated by the CFTC, and it really doesn't matter what level of whether you're a DTEF or a DCM. At the clearing level, if you are a registered DCO, you have to meet pretty stringent standards; you have to follow the rules of the Commission, or, if you are a foreign entity, rules that are deemed by the Commission to be similarly effective for the protection of the marketplace.

I'm just going to move on, if it's okay -- I mean, this is in writing and it's posted on our website, so if anybody wants to go to the pages I'm going through, on page 10, if we can switch to that, please --

(Slide.)

MR. WOLKOFF: It's very important with the management of clearing to understand what the experience of the marketplace is. Here's one of the places that I think we get to pat ourselves on the head a little bit.

We've been doing energy since 1978, and with respect to the physical delivery against contracts, we have overseen thousands and, indeed, tens of thousands, and if I went back to count them, I'm sure I could get that up to hundreds of thousands of physical deliveries during the term

of expiration of futures contracts. Next page, page 11, please.

(Slide.)

MR. WOLKOFF: Business has generally been pretty good. We cleared 130 million contracts last year. Now, most of those, of course, were floor-traded contracts. They were contracts that were executed on NYMEX and cleared by NYMEX.

However -- and I will say now that we have had good and growing experience with clearing transactions that were executed elsewhere. We have begun the Clearport brand that we've used, which stands for a system of clearing transactions executed elsewhere, or allowing an execution facility for those transactions as literally as futures trades and regulated as such.

And so since this began on May 31st of 2002, all of those non-floor-traded contracts, we have cleared 940,000 of them, and the daily average of business, interestingly, has been going up completely consistently, and of greatest interest is that we have now seen that whereas when we initially did this, the clearing of Henry Hub look-alikes, the most plain vanilla of plain vanillas, probably accounted for 90 to 95 percent of what we cleared. And now that number is down in the 60s and we're clearing New York ISO; we're clearing basis markets, and, of course, we're clearing

a lot of Henry Hub look-alikes.

But it's broadened out the number of participants which has grown, and the number of FCMs acting as intermediaries, willing doing so, has increased. So we're seeing a much greater comfort level with this.

I'm going to skip the regulatory history, and go to page 16, please.

(Slide.)

MR. WOLKOFF: We do accept transactions that are executed off the exchange. We don't discriminate where they are executed. We do hope to develop a liquidity facility and provide the kind of transparency that the Enron Online system provided. ICE certainly provides transparency in a number of markets, and we would like to be in that place.

We do, on a daily basis, settle these markets. I think John raised the point that when you're clearing transactions that weren't executed on the exchange, you need to develop a level of confidence in the reality of that price.

We have generally been relying upon the voice broker community, which, of course, represents both the buyer and the seller, and has every incentive to represent both sides of that fairly. We take the very scientific -- someone described it as the Olympic method of taking out the high and taking out the low, and excluding the French judge.

(Laughter.)

MR. WOLKOFF: And we do establish, for those contracts that we have open interests for, we establish a forward price. We do not price contracts that we have no open interest in. We're just not in that business of guessing what the price should be.

(Slide.)

MR. WOLKOFF: Page 18, the last slide, has a couple of things: With respect to the platform, whether the transaction was executed on-exchange or off-exchange, risk management is extremely important, and we have developed risk management capabilities for the FCM to control and to know exactly what's coming into the system at any given time at the present -- whatever limits the FCM deems appropriate.

The limits get in the way and then that becomes something that the FCM can change, but it's completely up to their own use of credit. We have nothing to say about them having to take a particular transaction, if it wasn't executed on NYMEX.

It's become much more automated than it was when we first introduced it in May. We thought it was critically important to get it out there. It wasn't bleeding-edge technology; it was bleeding-edge product. Fortunately, we have avoided the blood and we have now gotten to expanded hours where essentially the product is available almost all

week long. There is a little bit of a break on the weekends.

And, with that, thank you very much for the invitation. I would just say in closing that I would recommend to anyone interested in this subject -- I just read this last night. It helped me get to sleep, I will say, but it was actually excellent. This is something that Mr. Hederman's staff put together, The Natural Gas Market Assessment, and it's really an outstanding summary, one of the best things I've read on this subject so far, so I would definitely recommend it to anyone interested in this. Thank you.

MS. THORPE: Neal, before you finish, could you take about two minutes to run through some of the financial protections that are provided by NYMEX clearing, addressing some of the key considerations that John Davidson identified as being relevant?

MR. WOLKOFF: Okay, I'm happy you asked. I think you would have to start with the concept of segregation of funds, meaning that when a customer deposits money or puts performance bond, original margin, up with the clearing firm, that customer's funds are kept separate and apart from the clearing firm's.

Under U.S. law for U.S. regulated-entities, there is no exception to that; there is no opt-out as there can be

in the UK. And what that means is, if the clearing member ultimately can't pay the light bill -- and I'll just hark back to Drexel Burnham in the UK.

They couldn't pay the light bill or any other bill, and so the bankruptcy trustee grabbed a hold of all of the non-segregated customer funds, and they were tied up for years, whereas in the U.S, because that bankruptcy occurred on their house side of trading, customers all got their money back immediately and business was allowed to go on.

Secondly, performance bond, sometimes called original margin, a good-faith deposit, collateral, is exactly that; it's a risk-based amount of money intended to meet a customer's obligations, should the customer fail to separately meet them.

It generally is designed to protect against -- our standard is a 99-percent likelihood of default over one day. For the ClearPort products, we add an additional premium of 20 to 40 percent on top of that model. Generally, for floor-traded transactions, or any other transaction where there is an option market available, we'll use an option volatility model and base our margin requirements on implied volatility, otherwise historical volatility.

I think that in my career, I can remember -- and this doesn't mean it's the only times it happened -- but I

can only remember twice that our original margin did not cover the price move that day. And that includes the Gulf War and Hurricane Andrew.

Additionally, with respect to the performance bond, the fact that NYMEX is a gross margining exchange, meaning we collect the margin from the clearing members, from both the longs and the shorts, so if you're a clearing member, you have a lot of incentive to collect the money from the customers you're required to, because you have to post it with the exchange.

If you start loaning money, which you're not allowed to do, you're going to run out of capital. And so the benefit of being on gross margin over a net margin exchange where it's netted at the clearing member level, is that the money that's supposed to be there is there, and if a customer defaults to the clearing member, there is the protection of that good-faith deposit that is readily available.

Just a couple of other things: Mark-to-market occurs daily or twice daily, depending on the marketplace, and that assures that since you're using objective price references, that when you mark a contract against prevailing price and you collect money or pay money against that and get to the zero point every day, you're eliminating problems of risks staying open for a week or a month or three months

or a quarter or whatever. You're getting a current value every day, and you're forcing people to pay the difference between a losing position and that current value.

If a customer defaults to a clearing member, then what should happen is that the default should be no greater than the risk that occurred on that previous day, which, of course, also should be covered by the collateral performance bond on deposit.

And the last couple of things that are still important: Capital-based position limits, numbers of contracts that can be carried overnight are heavily restricted at the more minimally-capitalized firms. Firms like John's are allowed to clear everything they want to clear, and really are relatively unrestricted in that regard.

Small firms that simply clear locals, and intraday risk is what they're doing, don't have that much of a capital requirement and they are not carrying positions overnight, and it's easy for them to liquidate a local's position intraday.

And lastly, from us, of course, every clearing organization has its risk monitoring procedures. We have a special risk committee; we maintain a watch list, and what that watch list generally means is that margins, exchange minimums that apply marketwide, are enhanced for a specific

customer or group of customers, and that we make very regular calls and require clearing members to provide us specific information on a daily or intraday basis so that we know that not only are we tracking the customer, but the clearing firm is tracking the customer. And it's just a way of protecting ourselves.

I probably left out quite a few things, but thank you for the opportunity to get that in, because I think it's all there to build investor trust.

MS. THORPE: Okay, thank you, Neal. Now, we're going from market to now transition to clearing institutions. That's all they do, and our first presenter on this issue is Charles McElhenie who is in charge of business development at the Guaranty Clearing Corporation. Charles?

MR. McELHENIE: Thank you, Jane. Good afternoon, Chairman Wood and Commissioners. My name is Charles McElhenie and I'm head of Business Development for the Guaranty Clearing Corporation.

(Slide.)

MR. McELHENIE: I had the opportunity to participate in a number of events related to today's topic, including two recent seminars sponsored by the Global Energy Management Institute at the University of Houston, as well as numerous discussions with energy merchant companies and

other market participants over the last several months.

And I would say that while much work remains to be done to develop clear and effective solutions to the issues that we're discussing today, it is obvious that the entire industry understands the importance of establishing a unified approach to the credit and liquidity issues facing the energy markets.

For my topics today, I will begin by providing a brief overview of the Guaranty Clearing Corporation for those of you who may not be familiar with us, and then I'd like to focus the rest of my presentation on the services we provide, our approach to risk management, and the protections we provide to the markets we clear.

I will attempt to answer as many of the questions raised this morning by John Davidson as possible, however, I will readily admit that GCC doesn't have all the answers, which is why dialogues such as this are so important. Slide, please.

(Slide.)

MR. McELHENIE: To give you a little bit of background on our company, we are a wholly-owned subsidiary of the Board of Trade Clearing Corporation, also known as BOTC. BOTC has been in business since 1925, as it was mentioned earlier today.

GCC was formed in April of last year. We do have

a dedicated business development staff that is focused on developing a clearing model that will be appropriate to the OTC markets with an initial focus on the energy markets.

However, a good deal of our other staffing, as well as the actual services that we provide is subcontracted through the Board of Trade Clearing Corporation.

We are a registered derivatives clearing organization with the CFTC, which means we are capable of clearing on-exchange, as well as OTC products.

It's important to note that as Jane said, we are not owned by an exchange; we are owned by our clearing members. We do not list products; we do not provide trading platforms. Our focus is simply on efficient, cost-effective clearing services.

As I mentioned, we do utilize the BOTC infrastructure and processes. In effect, we purchase our processing from our parent, to ensure that we have well tested and proven clearing solutions for the markets we serve.

Among our current customers, two are here today, which are the InterContinental Exchange and Merchants' Exchange, our present focus is on organized marketplaces with marketing platforms that are already in place.

Our intent is to extent to other kinds of match trades as we find the solutions that are appropriate for those markets.

In terms of clearing participants, our clearing participation is open to anyone who qualifies, that includes FCMs and other market participants. Right now our clearing members are made up primarily of FCMs who are also clearing members of the Board of Trade Clearing Corporation. This is simply because we know they can pass the background check.

We do not restrict our membership to anyone that's in an exchange or other clearing organization. We are open to any companies that have adequate capital, appropriate infrastructure capabilities, and can satisfy the regulatory requirements and its standards as described by John Davidson this morning. And we do provide ongoing surveillance of our members to ensure that they continue to meet these standards.

Page 4, please.

(Slide.)

When you take a look at our clearing model, I'd like to simplify clearing and say that from my perspective,

the two most important parts of clearing are transaction processing and risk management.

From a standpoint of transaction processing, we do very much the same at GCC as what we do at BOTCC. We provide multilateral netting as described this morning. We compare and register trades, we aggregate obligations and identical products and net them down to a single open position.

We do collection and management of original margin or collateral. The key here is establishing a good policy as to how much margin must be collected, and this is based on extensive statistical analysis and it varies by product and marketplace.

We do mark-to-market twice a day, and we collect variation margins and do pay-collect processes twice a day. We use the same banking and settlement procedures as we do at BOTCC, which means we're using the same banking -- settlement banks and processes and infrastructure that is already familiar to our clearing members.

The most important thing about GCC is that we establish GCC with flexibility to meet the emerging requirements of the OTC markets. First, we are able to provide a unified settlement process across multiple markets. So, for example, if an FCM is clearing trades for the ICE and for the Merchants' Exchange, we can still handle

the settlements through common accounts.

(Slide.)

We do not have cross-default between our separate market guarantee funds. This is an important and also somewhat complex point, so I'll try to describe it as simply as I can.

We have set up separate mutualized risk pools for each market that we serve. To the extent that clearing participants are asked to contribute to these risk pools, they are only asked to contribute to the markets they participate in. And as long as a participant is not in default, then their contributions to the markets that are not in default will not be used to cure default in another market.

So essentially, the risk pools from one market cannot be used to cure default in another market. This provides some separation of risk between markets. I will talk a little bit more about this in one of my following slides.

Most importantly, we have set up GCC to give us the flexibility to tailor the rules as required on a market-by-market basis. We do have a standard set of rules that are published on our Web site that we abide by, but we also have variations as appropriate by individual market.

Essentially, if you take a look at the two

business partners that we have here today, with ICE and the Merchants' Exchange, I think it's safe to say that we provide them with identical capabilities, but we do not provide them with identical solutions, because in fact the needs of their markets are different.

I thought it was very appropriate the slide that Mr. Hederman showed this morning that showed all the intersecting circles indicating from his view that while there are pieces of each clearing solution they've looked at that offer some benefits, we are still, through the joint commissions, trying to find a solution for this industry that is a better fit than what we currently have available.

Next slide, please.

(Slide.)

When we look at the risk policies, we believe that the true value of what we provide is the risk management and not the transaction processing. These risk policies are typically determined in conjunction with the markets that we serve to make sure that they are appropriate to the users of those markets and to the protection of those markets.

There are two basic types of risk policies that we enforce. The first are margins. And the whole idea behind a margin from our point of view is that we're trying to create a balance between adequate market protection and

efficient use of capital. If we raise the margin too high, there's very little risk and nobody wants to trade because all their capital is tied up. If we set the margin too low, capital flows freely. Unfortunately, the risk is there.

So it is a balancing act, and it's based upon extensive statistical analysis of historical price moves.

It was mentioned earlier today that a typical margin is set to cover the price move that is expected between mark-to-market variations. We mark-to-market twice a day, but in some cases for more volatile products, we set our margins at what we expect to be two or even four-day price movements. This is again to provide adequate protection to the markets, and has been done in conjunction with those markets to make sure that we are maintaining the balance between risk and capital.

We margin two ways: On a gross and a net basis. Essentially, as was explained earlier, when a market participant puts a position with a clearing member, they are asked to post margin with that clearing member to cover their position.

In some markets that are not highly volatile, we collect what we call a net margin, which means we allow the clearing member to net the positions of the individual accounts they are clearing and post margin based upon the netted positions. In effect, what this does is says that

the clearing member is holding part of the margin that's been deposited and we are holding part of the margin that's been deposited. There is no difference to the market participant.

In more volatile markets, we use what we call gross margining. Under gross margining, we do not net the positions across account, so we collect all of the margin that has been given to the clearing participants and hold that ourselves to provide extra protection to the markets. Again, this is a way for us to balance off the use of capital and try to treat each market as we see best serves its needs.

We also apply what we call variable margins, which are extra or super margins that can be invoked when the price moves are large in comparison to the margin that's already on deposit. This applies to an entire market. So if there is a large price move in a single day, for example, a price move that is 50 to 100 percent of the margin on deposit, we can collect additional margin to hold us and provide additional risk protection through the period of volatility until the market stabilizes.

We have what we call concentration margins. This is applied to individual clearing participants who are holding large or concentrated positions within the market. And again, this protects against a concentration of risk by

collecting additional capital when the risk is not spread equally. Effectively what this does, if you think about it, sooner or later you can't post the margin. Therefore, you cannot take a larger position in that part of the market.

We also in the energy markets apply what we call a "Spot Month Margin." This applies during the contract expiration month leading up to the day of contract expiration. We gradually increase the margin.

What this effectively does is take people who are hedging, or people who do not intend to actually make or take physical delivery, and it gives them incentive to come out of the market as the margin increases.

So what we have done there is give other participants a chance to join the market and increase the liquidity but still provide some protection against having people go to contract expiration and then not being able to take or make delivery.

This also provides a ramp up to a delivery escrow process that we provide, which I will describe later.

In addition to the margins as I have described them, we do take into account the overall portfolio of our member firms. We look for correlation between their positions and, when possible, try to provide offsets in the margin required when they have related but not identical products that have offsetting positions. We also take a look at calendar spreads and adjust accordingly for those as well.

From a standpoint of limits, this applies at various levels within the market. The simplest is the

trading system limit which establishes on a customer-by-customer basis the Ordered Quantity and Net Position Limits by customer.

Again, this keeps people who have small amounts of capital relegated to small amounts of trading volumes relative to the larger firms.

We have what we call Exposure Limits. When the amount of positions that you have open becomes very large in proportion to the capital you have to back it, we again begin to escalate the margin required from you and apply a supermargin to keep things in line so that you do not exceed the amount of capital that you've got to back you.

We also in some of the markets that we clear apply what we call "Daily Price Limits" so that if the price move exceeds a certain limit for a given day, we effectively stop accepting trades for clearance until the prices come back into line.

Once again I would like to emphasize the point of these risk policies. There is flexibility there, and it is determined on a market-by-market basis. Slide six, please.

(Slide.)

From a standpoint of how we actually run the margin collection process, it is quite simple. If you establish a position today, we need to collect your margin before you are allowed to trade tomorrow.

We take the price feeds at the end of the day. We mark your positions to market. We collect your margin the next morning. If your margin is not on deposit when the market opens, you are not allowed to trade.

We also do a mid-day mark-to-market and pay-collect process. I think the mark-to-market has been explained. Again, the idea here is to keep trace on an ongoing basis and make sure that the margins and the positions are monitored closely and not allowed to get too far out of whack.

The treatment of the special margins, the variable margin, the concentration margin, the exposure limits are all collected the next day based upon the previous day's activities.

The timing and type of the payments, we make all our margin calls in cash. However, you are able to substitute acceptable securities once the cash call has been made. Typical securities are government debt, government agency debt, money market funds; we are constantly working to expand our listing of acceptable collateral.

Again, we would be happy to provide more detail on what we accept--haircut rates, et cetera--through offline conversations or through a visit to our web site.

In situations where your positions have decreased, excess margin is available at 9:00 a.m. the next

business day if you need to withdraw some of it. Next slide, please.

(Slide.)

A lot of questions have been asked about delivery, especially in the energy markets and especially when it comes to power so we wanted to address this specifically.

We do not provide guarantees on physical delivery. In fact, in our view it is unrealistic. There are too many issues with transmission and storage in the energy markets to guarantee physical delivery.

However, we do recognize the need to manage and mitigate those risks. So we have several policies and offerings in place to help with those.

First, as I mentioned, we do the Spot Month Margin to try to move people out of the market that are not qualified to make or take delivery. And in fact we do have rules in place that will force liquidation of those positions as we come to the contract expiration.

This helps reduce volatility in the markets as the contracts near expiration, as well as avoiding delivery scenarios that are impossible to fulfill.

We have a flexible matching process that is coordinated with the individual markets to maximize the efficiency of delivery. Essentially what we are trying to

do through matching, instead of just doing it on a random basis, we are trying to match according to quantities, geographies, and other logical considerations that the parties would observe themselves if they were trading bilaterally. We are not trying to put together a buy and a sell that don't match.

Further, we offer an optional delivery collateral management process that helps reduce the risk of delivery default. Basically what we do there is we collect collateral and hold it from both the buying and the selling party.

At that point in time, the seller knows that if they deliver they will be paid because the collateral is on deposit. The buyer does not have quite such a strong assurance because the seller could default on their delivery midmonth and we would be forced to go out on a spot market and attempt to cure that situation.

What we do to help reduce that risk is continue through the month to measure how much of the contract remains to be delivered versus the current spot prices and collect additional collateral along the way so that, as well as we can tell, the tanks is "topped off" in case we need to refill it.

It is not a guarantee that physical delivery will occur. However, it is a collection of funds that will help

if a default occurs mid-delivery to provide the buyer with some cure for that default. Next slide, please.

(Slide.)

The last thing I would like to talk about is our default structure. For the purposes of this illustration, we have shown three separate markets.

In the event that there is a default in any single market, what would happen to cure that default is we begin by taking the margin deposits of the defaulting member and applying them to the situation. If those are not sufficient, we look at the funds payable to the defaulting member. If those are not sufficient, we will look at other funds that may be available to us from the defaulting member.

We have made special provisions for how we deal with clearing members who are in default in a market. They give us some rights to treat them as if they were in default in other markets.

Once we have exhausted the availability of funds from the defaulting member, we then go to the Market Guarantee Fund. The Market Guarantee Fund is made up of contributions from the participants in that market. We will not go to the funds in other markets, other Market Guarantee Funds that are not in default. We will stay with the Market Guarantee Fund that is in default.

We also have provisions to make additional calls for funds from the clearing members to replenish the Market Guarantee Fund if that should run dry, and that is the additional collateral on call.

Finally, we go to the general guarantee fund, which is backed by GCC, and other assessable assets that we

may have. So we have chosen a default model that is a combination of mutualized risk, as well as non-mutualized. We back some; some is backed by the clearing participants themselves.

(Slide.)

In summary, I would like to first of all thank the Joint Commission for sponsoring this conference and for providing GCC with the opportunity to participate on this panel.

I would also like to thank the other panelists and attendees for their participation as I believe events such as these are critical if we are to develop solutions that effectively address the issues facing today's energy markets.

If anyone has any questions, I would be happy to answer them here. We also have some pamphlets in the back of the room. Thank you.

MS. THORPE: Thank you very much, Charles.

Now we go to the clearing provider who has certainly come the farthest to join us today. Andrew Lamb is Deputy Chief Executive and Managing Director of Risk at the London Clearing House. Andrew -- and thank you all very much for keeping to your allotted time.

MR. LAMB: It's a pleasure and quite an experience to be here. I'm the one with the funny accent.

I'm one of the few who didn't work for the Chicago Mercantile Exchange.

(Laughter.)

MR. LAMB: Before I started working for the London Clearing House, I worked for the Bank of England. And I think there are in fact a large number of similarities between central banks and clearinghouses. Both types have got a pretty good track record.

I feel rather angry with John Davidson who said practically everything I wanted to say, including even down to my first slide, where he actually said that the London Clearing House with a different name was established in 1888.

Interestingly enough, I think in the context of this seminar conference, in 1888 the Economist Magazine in London writing about this newcomer, this clearinghouse, decided that the experiment was likely to be short-lived and that it was a very bad idea introducing a clearinghouse for the commodity markets because, and I quote, "there would be a leveling down of credit."

(Laughter.)

MR. LAMB: Well, you know, more than a hundred years on, what's happening around the world I think is the central counterparty clearinghouse model, I tend to use the whole description, the central counterparty clearinghouse

model has been spreading from the original agricultural commodity markets across exchange traded futures and options into real OTC markets, differently traded markets.

(Slide.)

As most people here won't be familiar with the London Clearing House, my first slide just traces our history. I mentioned the origins in the 19th century. We began our experience with energy with clearing with gas and oil when we started to clear for the International Petroleum Exchange in '81. Our model, we are an independent clearinghouse owned, for the most part, by the clearing members, the users, and in a minority way by three futures exchanges in London, but the most important part of our model is that we are independent of exclusive ownership by any one marketplace. Our clearing then expanded across exchange markets in London as those separate exchanges decided not to reinvent the wheel, not to establish their own clearing organization but to ask us to do it.

We expanded to take on board the clearing of the London Metal Exchange in '87. That exchange had been around for a very long time. It predated the London Clearing House. But it was only in 1987, after the difficulties of the tin crisis, which some people here may have heard of, that they decided to introduce central counterparty clearing in order to strengthen the integrity of the marketplace.

We then moved in the 90s to clearing cash equities, something that had been done from the mid-70s, I believe in the States with the National Securities Clearing Corporation, but it only took over in Europe several decades later.

We then moved from the clearing of exchange traded products of all kinds including gas and oil to the clearing of OTC or bilaterally traded markets. I think one point I'd like to make, having listened to many excellent presentations here, is there isn't actually a standard definition of OTC or over-the-counter trades. As it happens, many of those trades nowadays, well as David Goone has explained, are not negotiated bilaterally interoffice or over the telephone between banks or brokers. Many so-called OTC trades are in fact negotiated on automated trading systems with anonymity and therefore the boundary lines between conventional exchange traded trading and over-the-counter trading. Those boundary lines are increasingly blurred.

The general conclusion of the London Clearing House in terms of risk exposures and the work of a clearinghouse is entirely about risk management, Charles was right, but our conclusion is that it is perfectly possible to clear over-the-counter markets. In many respects they can be more liquid than exchange markets. I think that's

true of the plain vanilla interest rate swaps.

But a clearinghouse as a risk manager must above all be aware of the distinctions between products and marketplaces and must tailor its risk management accordingly.

The final stage of our product scope and market expansion has been to begin to clear for the Intercontinental Exchange, and we've also started to clear for European, mainland European power products, a marketplace called Index.

(Slide.)

Let me just continue this with the second slide, the institutional history, by talking a little bit about regulation and Jane Thorpe asked me in passing to talk about the oversight regulation of LCH in the UK.

On the UK side, LCH is a recognized clearinghouse which is a special category of designation. The legislation took a long time to catch up with LCH, because as you see, the first legislation didn't come along for 100 years after we were up and running.

Our designation or recognition now and the oversight of what we do is carried out by the Financial Services Authority. The Financial Services Authority is, if I can call it this, a conglomerate financial services regulator. It combines the CFTC, the SEC, the Fed, the OCC.

They're all there in one building. In terms of their supervisory regulatory oversight of clearing organizations and particularly of the London Clearing House, then I think their approach is very similar in fact to that that has recently been developed by the CFTC.

They have a set of guidances, they don't call them principles but they're guidances which expand on the legal recognition requirements laid out in the financial legislation and the guidances offered by the FSA cover all the territory covered in the 13 principles that were mentioned earlier in the CFTCs.

One thing I would say about the oversight regulation of clearinghouses across the world is that there has been no attempt, so far, to lay down financial and capital adequacy standards that are anywhere near as precise or detailed as is the case with the four financial banks and other financial intermediaries.

As yet the oversight regulators have built standards and guidances around the current practices and well established practices of clearing organizations. Whether the time will come that the regulators to become more prescriptive, I don't have my crystal ball but I make the comment anyway that the regulatory guidances and principles are relatively general as things stand.

(Slide.)

Finally on this the second slide, LCH is one of the 13 DCOs. I believe that we're the only one based outside the United States. Our designation only relates to OTC business. It does not extend to designated contract market business, and there of course the designation and oversight is from the CFTC.

(Slide.)

On the third slide I begin to get into John Davidson territory, but I want to talk specifically about how LCH organizes its clearing. So although my slides are general, I will fill them in.

My third slide, which just mentions at a very high level the central counterparty model was much better covered by John, but I think the basic point to emphasize really is that you don't notice Central Counterparty Clearing House most of the time because things just happen. The members meet their obligations often in the case of physical delivery. The members or even their customers actually make payment and deliver, and you don't notice that there's a central counterparty there at all.

However, and this is the point about the novation and the legal responsibilities, the essence of a central counterparty is that where there are problems, he must live up to his name because he is the buyer to the seller and the seller to the buyer, and he must perform. If the central

counterparty does not perform, then arguably, no definitely it has been bad news having a central counterparty in the first place. If the central counterparty cannot perform, you would be better off having stayed with bilateral obligations because that way you're dispersing the risk.

There's no doubt about the fact that you do concentrate the risk with a clearinghouse. They have a great track record but they can't rely on that, they have to continue with management vigilance.

(Slide.)

I begin to get a bit more specific here. I mean how can a clearinghouse ensure that it is that when needed and it has the funds and the procedures to discharge its obligations to ensure that there is not systemic risk? Well, the first thing of course is the membership requirements. It is important that the members meet tough requirements because in practically all cases -- no all cases actual central party clearinghouses actually call upon the financial resources of their participants the members to underpin the financial integrity of the system.

In LCH's case, we think it important that the standards should be different across the markets that we clear. John mentioned interest rate swaps. This session is about energy products, but if I mention interest rate swaps, it makes the point. A minimum membership requirement there

is for net capital of \$5 billion. Because we're dealing with an inter-bank market, we do not want banks' customers clearing. It's an inter-bank facility, and if there are problems, we have to rely for default management on the surviving banks. We want very big balance sheets, we want very big swap books and the ability to help us.

In the case of the energy markets, we don't feel that the standards, minimum capital standards need to be that high. Our minimum standard is about \$8 million, I'm translating rapidly from sterling, but we do obey the Davidson rule, one of his many rules for clearinghouses, I've noted them all, we do obey the Davidson rule of having higher requirements relative to position and exposure size.

I think one aspect of our arrangements, and I know it's the same Charles mentioned it, is that the clearing firms that our direct member exposures, and our guarantee in performance only extends to the members and not to non-clearing participants. But we are open to those members being either financial intermediaries or trading companies.

We have long had, since the early days of clearing the International Petroleum Exchange, Shell and BP have been members, we have other trading companies, Hydro Aluminum of the State Aluminum Company of Norway is a

clearing member for the metal exchange business.

The point I think that I would make about the direct participation by a trading company, a merchant company I think, the point I'd make about that direct participation in a central counterparty clearing system, is that central counterparty clearing houses are extremely greedy, necessarily so in terms of collateral and access to money, so that if a merchant joins directly, he must establish the banking facilities that ensure that the variation margin payments come through to the clearinghouse, so a merchant is going to need to establish banking facilities in any event, and to supply his own collateral, which is one of the reasons why in many cases the decision has obviously been that it is better to indirectly access clearing through a financial intermediary.

(Slide.)

Lots of people have spoken about margining and revaluation. I think I'd make a couple of additional points. The margin, which has been mentioned, is actually the core measure of the market risk that a central counterparty clearinghouse must manage effectively if there is a member default. So the initial or original margin or the I think it's called a performance bond by the Chicago Mercantile Exchange -- I didn't work there but I know some of their terminology -- the margin requirement is the core

quantity and there's certainly a difference in practice at the clearinghouse with the standard that John mentioned because we do not regard one day's cover as sufficient. Our minimum standard is two days cover and it's three standard deviations, although it's not an entirely statistical exercise. I think Charles and I are at one there.

Just because you are revaluing at least daily does not mean when you've got a default that you can be certain to close out the positions in a day. But the core market risk protections I think of any clearinghouse and certainly ours are the margining, the estimation of the market risk, the daily or many times a day revaluation. We vary on the number of revaluations but one point I'd make. Several speakers have called that revaluation marking to market. I think it's very important to emphasize that for the most part in the cleared markets, it isn't just marking to market. A lot of OTC banks will say they have marked their positions to market which simply means they've entered them in their books at what appears to be a reasonable market price.

But we refer the marking to market as a settlement to market because it is linked to the actual novation of contracts. So we are actually producing a new contract each day which is based on the latest market price, and through the collection of profits and losses, we are

narrowing the price window.

One other extremely important point, which is the last point on this slide, is the legal framework. I've got more on that later, but I think it is incredibly important that a central counterparty clearinghouse, if it has to manage a default, it is incredibly important that it cannot be picked off by insolvency practitioners or anyone else. Its procedures and what it does to handle a default must not only be quick, but it must be as legally protected as possible.

Because that legal exposure of course can undo all your calculations about how much you need in the bank to handle the default.

(Slide.)

The risk management model membership participant standards I think I probably covered that already. The market risk protection, perhaps I could just make two points about that slide.

I've made the one about the initial margin and the way we calculate it. The requirements inevitably vary between contracts. There should also be a distinction made between maturities in particular contracts. And a lot has been said about the mutualization of risk. I don't know of a clearinghouse in which initial or original margin or performance bonds are mutualized. Clearinghouses can only in a default apply the initial margin or original margin of the defaulter. The contingent resources sit below the initial margin. I think that's so the mutualization of risk is not entire.

(Slide.)

The contingent financial resources. The quality and liquidity of the contingent resources is important, and not just their size. Our default fund, which is what we would use if the initial margin of a defaulter were insufficient to cover the market losses of our restoring

equilibrium and discharging our responsibilities, our default fund is half a billion dollars. I've done my conversion again. We have sitting behind that default insurance from financial security assurance, the Mono Line assurer of \$300 million, and then we have our own capital of \$100 million. Those quantities are pretty substantial. As I said, the default fund is in cash, held in our name, so it is immediately available.

The most important point I think about the contingent resources is that their continued adequacy should be tested with a rigorous stress testing model that takes a very serious and hard look at whether the price assumptions built into the margin calculations are correct. So on the basis of that stress testing, our fund has risen over the past three years. It has doubled in size.

There's one difference in our arrangements. If there's a default, no matter what marketplace, we can use the entire default fund. We would consider it very strange were a member to be active across several markets, we would consider it very strange that we couldn't use all his funds if he had defaulted in one. In fact, they either default or they don't default, as far as we're concerned.

I'm taking up too much time. I'm getting near. My only excuse is that I traveled a long way.

(Laughter.)

MR. LAMB: I'm on my final slide now.

(Slide.)

I think that probably the legal framework and the legal certainty hasn't quite come out as much as it might so far. It is extremely important that everyone knows who the clearinghouse stands behind, who is the clearinghouse directly guaranteeing or underwriting. In our case, there's no doubt about it. It's the clearing members. There is a principal-to-principal relationship there.

There are significant client protections in the exchange markets, but those are indirect. It's very important that the assumptions about netting and offsetting that are built into the calculation of the risk quantities. It's clearly of the essence that those assumptions actually come to pass in a default and that everything isn't unpicked by someone effectively challenging the netting and offsetting or blocking access to collateral.

It is important that central counterparty clearinghouses and certainly in the States and certainly in the UK and increasing across Europe, central counterparty clearinghouses are specifically protected under insolvency law regimes and bankruptcy codes. There's a quid pro quo there. Typically there is in the UK, and that is that we have to have established default rules and default procedures so that people know more or less how we are

going to handle a default.

I don't think in the time I've got anything more to say other than a wrap-up comment, which is that I firmly believe, and my company does, that central counterparty clearinghouses can offer a great deal in terms of financial stability, operational simplification, transparency, trading liquidity. They can offer a great deal to a whole range of marketplaces.

But there are several prerequisites. One of those is that the marketplace actually wants a central counterparty. I think it's no use forcing the model on a reluctant marketplace or a marketplace it doesn't fit.

And the other thing is that there needs to be, there typically needs to be in the case of contracts that are cleared which go through to physical delivery or settlement, that aren't just cash settled by the exchange of one net payment, there needs to be a very, very clear, solid delivery framework and settlement framework into which a central counterparty clearinghouse can fit.

If that delivery or settlement framework is not well constructed, or if it's uncertain, then it's likely in its risk evaluation that the central counterparty clearinghouse is going to decide that it cannot manage the delivery risks. And I think that it is actually preferable that a central counterparty clearinghouse hangs on in there

through the delivery process if it can, because I think if it cuts out before, it's not really offering the full value added.

But unless the delivery mechanism is of that kind, then the risk analysis would suggest that you have to draw the line.

I'm sorry to have overrun my allotted time.

MS. THORPE: Thank you very much, Andrew. We're actually at the end here of this event, but I'm hoping that since we started late and we have one more speaker to go that you will indulge us and let Dennis Earle have his 15 minutes. Thank you, Dennis.

Dennis is the President and Chief Executive Officer of EnergyClear Corporation.

MR. EARLE: Thank you, Jane. Thank you, Mr. Chairman, Commissioners. It's a pleasure to be here this afternoon. Being from Texas means you're never last, so I'm not worried about that.

I'd like to go back to what John said this morning since I guess we're sort of wrapping up the CFTC panel sandwiched between the two of us. I've spent a lot of time over the years thinking about what a clearinghouse really is.

I mean, we operate a lot of heterogeneous entities. We don't look the same. But when you get down to

the real basics, it's a group of firms that come together that agree to abide by a set of rules and procedures and to put up money to protect themselves against the failure of one of their own.

And the operation, the company that administers these rules and procedures, at least in the United States, is protected under the Bankruptcy Code and FDICIA, which means under FDICIA, any netting that we do sticks in a bankruptcy, to ensure that these systems work. Waiting for Andrew to finish, I sort of lost my voice.

(Laughter.)

MR. EARLE: It seems to me that we have to step back and ask what the value of these clearing systems are by example. If direct membership in a clearing system was not important, we'd have one clearinghouse in the U.S. Because if it didn't matter whether you were a direct participant or an indirect participant, we'd have had common clearing in futures 15 years ago.

There is a premium that members pay for that direct protection, to be a member of that association. And although the way we approve futures contracts in the United States has traditionally meant that most of our contracts have been liquid, we forget that on the other side of the regulatory fence over on 5th Street, the Securities and Exchange Commission in the last 20, 25 years approved a

clearinghouse for the pink sheet market, which we now call NASDAQ, for the municipal securities market, for the mortgage back market, for the Brady bond market, and eventually for the forward and when-issued market in U.S. government securities. And in each of those clearinghouses, the members put a very high premium on the direct protection of a clearing system.

Is the OTC market in energy a market in its own right? And if it is a market in its own right, is it any less vested with the national interest than the muni bond market? And if the answer to that is no, that it's just as important or more important, then we need to seriously step back and ask ourselves what kind of a clearing system we are building for the energy industry.

The second chart on my presentation is a comparison of two triangles which you have in front of you. Our so-called traditional model and an OTC model.

In a traditional model, a participant in a system can either be a direct member of the clearing system or an indirect member. You know, as I look at the table here today, my esteemed colleagues, and they are, these are excellent organizations, there's a missing chair up here at the table.

We talk about the FCMs that merchant energy companies have to clear through to get to the clearinghouses, but they're not sitting here. And in not sitting here, we tend to not visualize the fact that they are the ones that are putting their balance sheet at risk for the merchant energy companies that clear through them, not the clearinghouse on the other side of the FCM.

EnergyClear is the model on the right side of the page. We were established under and pursuant to the CFTC and the CFMA to take merchant energy companies as direct members. We are owned and operated by merchant energy companies for merchant energy companies. And I would submit for your consideration, if you looked at NASDQ, which we used to call the pink sheet market, you would find that this model is exactly the same as what the NASDQ members set up when they were trying to establish their own market with

their own independence and their own stability.

(Slide.)

If you would be kind enough to turn the page to the OTC risk philosophy. EnergyClear operates with industry developed risk procedures, we do real time collateral checks on those participants, which you'll see in a page or so, we feel have greater exposures to the system. We run at a 99.5 percent VaR rate daily.

(Slide.)

If you turn the page to margin rates. In trying to answer some of the questions that John posed this morning, we compute our initial margins based upon Monte-Carlo simulations and SPAN Scenario Analysis at the 99.5 percent level. We collect variation margin once a day. We do not use settlement banks, we do use direct members of Fed Wire. The genesis of settlement banks in the U.S. futures clearance and settlement system was tied to the floor trading community and the desire to be able to rule off a book before the floor opened.

The OTC market never closes. There's no need to rule off the book before the floor opens, so we were able to take a different perspective on how the banking relationships were established.

(Slide.)

Again, if you would turn to membership

categories, I'm going to try to both keep us on time and get to the more interesting stuff which is the real policy questions that have emerged from this intersection of our industries. EnergyClear, because it clears for merchant energy companies had to recognize that they are also not a homogenous industry. Many of them are rating-stressed. And we accept, as direct members, both those firms that are in excellent financial condition and well rated, and those firms that we call in recovered class, and we are operating with a recovered class member.

A recovered class member is a merchant energy company who is not otherwise qualified for membership but is allowed to state in the clearing corporation and maintain the benefits of netting as long as they maintain a balanced book and a higher level financial protections. Why is that important?

We talked about netting this morning and the benefit it brings to market liquidity. I think that's self evident. We also forget that a group noted in the early 1990s that netting makes it harder for a firm to fail. By the netting of liquidity requirements we make it less likely that any given firm will face a liquidity crunch in the settlement process and therefore make it less likely that firms will fail during times of market stress.

(Slide.)

In terms of product and position limits, the next page, we all have product limits. Product limits are designed to protect the clearing corporation and to ensure that we actually have a cap on what the exposure is. This identifies the way EnergyClear determines its product limits and its position limits. And as you can see and reflect on this in your own time, they're basically credit indexed. They're indexed to the credit rating of the individual firm.

(Slide.)

On the next page as to our financial default resources, noting that we clear only OTC gas and power. We obviously collect variation margin like everyone else does, initial margin like everyone else does. Our guaranty fund which is put up by the merchant energy companies is a minimum of \$2.5 million per firm. We require a minimum of \$20 million parent guarantee by the parent operating company, and we have \$100 million committed line of credit, same day line of credit from the banks.

As of this morning, we were running with \$120 million in liquid collateral followed by the parent guarantees which also accumulated for another \$100 million.

(Slide.)

On the next page, we have a list of the products. Products are products. Any clearinghouse can add any product quickly for which it can find a reliable price or

index. Adding products and the scope of the products is not a measure of the viability or the efficiency of the clearing system. We can all add or subtract at will. Let's go to the next page if you would.

(Slide.)

Clearing in the United States was an interesting but boring business until OTC energy came along. The most exciting conferences I ever went to were the FIA where we had the annual debate about whether or not the MERC and the Chicago Board of Trade would do common clearing. And we had that debate every year, so it was very predictable.

Then OTC energy showed up because you represent different delivery characteristics than the traditional commodities that we have handled, different liquidity in your market. If there's no generation, there's no generation. And you've raised many policy issues that we simply haven't thought of in a long time.

If we look at the accumulated wisdom around this table, which goes beyond the Chicago Mercantile once in a while, the fact is our systems are evolutionary, not revolutionary.

We've taken systems and over a period of time evolved them in gradual, well thought out, well measured steps but they were not designed on the futures side of the clearance and settlement system for markets that were less

than liquid.

And while our counterparts in the securities business have built clearinghouses for less-than-liquid instruments, because surely one can define the municipal securities market at the end of the 1980s as being less than liquid when it was there on a given day. We have not had, on this side, the experience of having to deal with the industry that FERC brings to this table.

The Bank for International Settlements has had a rather interesting view of futures and securities clearinghouses for the last ten years. We sometimes use the word guarantee. And they take exception to that. They say that a clearinghouse protects trades up to the limit of its financial safeguards because in the end, if you can't liquidate a trade at a price you can afford, you can't liquidate the trade. And I think Andrew correctly points out clearinghouses have to be able to act in a predictable manner.

Well what happens if a clearinghouse knows that there is the possibility that it might not be able to liquidate a trade at a price that he can afford within the financial safeguard system? That is not an issue that we have faced in the futures clearinghouses. That is an issue that securities clearinghouses have faced such as a muni and mortgage-backed securities. What we have not done is to

bring that expedience and that knowledge for how to deal with less than liquid markets from that section of our industry over to this section of our industry.

And if a position can't be liquidated at a ratings agency reaches a point of view that a clearinghouse might be unratable because it might not be able to liquidate positions, what comfort can they possibly give the participants in that system as to the ability of the clearinghouse to represent a useful and rateable clearing solution for the industry?

When we talk about OTC delivery, and I think my colleagues at the other end of the table correctly pointed it out, the delivery of energy products is significantly different not just in terms of time frame but also the fact that if it's simply not there, it's simply not there. None of us guarantee delivery. We would all like to think that in some manner, shape, or form, we protect during delivery. The traditional mechanism by which futures clearinghouses have protected during delivery has been through a combination of delivery margins and occasionally some commitment of the balance sheet of the clearinghouse of the exchange.

But what if they are not fundamentally adequate to provide liquidation damages to the energy participants who are looking to use the clearing system? I mean in a

way, if we had been doing this conference in a pre-Enron, pre-CFA environment, we'd have had one clearinghouse sitting here with a lot of rich energy companies and it would have been a very simple discussion.

But your side of the table represents companies that are, at best, rating stress, representing fundamental concerns about the underlying of those companies, while our side of the table we have a collection of very fine clearing corporations who are trying to figure out how to compete with each other. And the intersection of those two means that there is no one single answer, and in fact we may all or may none of us have the right answer.

I think Charles correctly pointed out it is important that the dialogue between the agencies and between the industries continue so that we can figure out what the right answer is. For example, when Participants Trust Company was created to serve the municipal securities industry, it did not provide a benefit of the bargain trade guarantee. It did not neutralize the risk among the participants, but it did stabilize the municipal securities market. As a matter of fact, we haven't heard a peep out of it in the last 15 years; it's worked rather well.

The truth is that sometimes taking a classical clearing solution and trying to apply it to a non-classical market is not the best answer. Sometimes you have tailor

the solution to the target market to get the solution that the target market really requires.

Because in the end, who are we trying to protect? The FCM or the merchant energy company? I thought it was the merchant energy company. And if that's true, then we have to come up with solutions that absolutely provide the best possible but predictable protection for those merchant energy companies.

Turning to the next page, structured deals as John correctly points out this morning have always been the problem I guess of the traditional clearinghouse. We have not handled them. We have not handled them well. And in general we have tried to pretend that they don't exist.

But in fact in the merchant energy companies, there is an enormous portfolio of structured deals. And in talking with them, as you do at the Barrens Bower Institute and going out and visiting merchant energy companies, it is not clear that they should go away.

In many cases, they reflect customized transactions which reflect either unique production or unique consumption requirements. We have to find a way for this table to, using the words of the Bank for International Settlements, protect them. Maybe we can't guarantee them but maybe we can protect them in an attempt to help stabilize the merchant energy company over-the-counter

trading community.

What level of protection is required by the merchant energy companies and how a traditional clearing system can provide it in a way that is satisfactory to the rating agencies I think is going to prove an interesting challenge.

Now we've informed the CFTC that we are fundamentally altering energy clearance rules. Despite all the money that we have, we're not convinced that's enough. We are filing rules with the Commission that we will de-neutralize the risk on the merchant energy companies and in addition to that, we will in a separate risk pool, accommodate those FCMS who want to clear OTC energy but at an OTC energy clearinghouse.

Now let me take off my energy clear hat for a minute and talk about the energy conferences that I attend, having now talked about my CFTC obligations.

I think in the end it doesn't matter if there's four clearinghouses and 100 percent of the merchant energy companies use them. Maybe not an ideal solution but kind of works. What would it mean if there's only one clearinghouse but only five percent of the merchant energy companies use them? I don't think that's much of an answer.

And I think that's sort of the paradox that's sitting in the middle of this table today in this hollow

square, unanswered. Have the merchant energy companies agreed that this is a viable solution to help address their credit problems and given the history of clearance and settlement reform in the last twenty years, is it likely that the merchant energy companies, any more than the broker/dealers or the FCMS will ever achieve consensus on their own among themselves without some incentive from the public sector.

I would remind you that the Group of 30 Reforms, of which I was executive director in the early 1990s, were probably the best example of the private sector coming to the table with an initiative to improve the system of clearance and settlement in the United States. But as you know, we failed. We as the private sector were never able to achieve consensus on reform. The way those forms were implemented was the private sector brought the agenda to the public sector and the public sector adopted that agenda as their own.

So perhaps the question isn't how many good clearinghouses you have -- you have three of them -- we do different things, we protect in different ways; perhaps the question at the end of the day is in the intersection between our two industries, will the merchant energy companies be willing to adopt clearing, and if they're not willing to adopt clearing, is the market of sufficient

public import that there is a public policy issue that should consider recommending clearing to the merchant energy companies. And with that, I'd like to conclude my remarks.

MS. THORPE: Thank you. Thank you very much, Dennis. I think all of us have a better appreciation of the clearing process and the range of the options and models that are available and how perhaps one-size-fits-all approach is not necessary or even desirable when it comes to clearinghouses.

I'd like to thank all of you for coming today. I hope that the Commissioners may have some questions, obviously time permitting, to any of the presenters here or to the members of the first panel.

CHAIRMAN WOOD: I feel like I'm back in school again. Back in school but they give you power points with all the stuff written out, you can actually listen to what people are saying. I've got a number of questions but I think Dennis probably kind of hooked on it there at the end.

Based on those of you who are doing energy, and that's my own selfish interest here, but it's our forum so, what is the answer to Dennis' question from the other folks here?

Does energy, gas and power, oil maybe put that aside, does energy lend itself to the use of a standard clearing type process that we discussed from you all and if

so, does it need a nudge, or is there kind of a first mover disadvantage or for lack of a first mover, incentive to get the critical mass necessary, as Mr. Davidson described. It's kind of the same question I asked him, but you all are out there trying to peddle your wares. I guess I'm wondering where are the buyers. Why aren't they jumping up and down. David?

MR. GOONE: I think I'll, I would certainly say we're getting it in the gas markets. I think NYMX Neil mentioned it as well, we're certainly seeing activity and players coming in. We have 70 companies. That's a fair amount of companies clearing. I think that market is moving along. I think electricity has its own peculiar issues that make it a little more difficult, the delivery process for all of us. Charles explained how it works viz a viz the Intercontinental Exchange System, and what happens is it's just a long education process.

I would say from my standpoint, I do think the bulk of the risk can be mitigated through the standard model. I mean that's the one that we adhered to and most of us I think are adhering to for the bulk of the risks. We're not going to be hedging the tails, you know the five or ten percent that gets more difficult. And I would suggest that even if that weren't the final solution for the industry, it is certainly the first step regardless because you do need

to take these in steps.

I think the harder part is--

CHAIRMAN WOOD: Sorry, David, "that" meaning?

MR. GOONE: Sorry. Starting with the more traditional clearing models. The issue we see, at least from our side, and I think the clearinghouses that we're working with, is focus among the organizations. There's no real champion when we see it when we talk to an organization to get them to go to clearing. So it takes a tremendous amount of effort and time for all of up here.

Because not only do you have to talk to the legal staffs of all the companies and explain everything, and in the case of our power going through EEI 2.1 and the amendments that you go to into physical delivery and the length of time that it takes to explain that to the attorneys, and then you have to go get the traders engaged, and then you have to go talk to the credit managers. And then sometimes you have to talk to senior management.

The issues we're talking to them in separate pools. There's no one at those companies who's responsible for carrying the water through all of those separate pools within that company. So to some extent, it's almost like a smiling and dialing we're doing within these companies to the various areas. You have great meetings, and then it just -- unless you have a champion who's willing to cross into the other areas within those companies, it doesn't

happen without a lot, a lot of work and a lot of legwork and time.

Now we've been doing power and certainly others have for under a year now, and I think just the amount of time and effort, you know, we're just starting to see fruition. So I think education and the nudge that could happen is somehow getting the focus within these companies would certainly be helpful to all of us. I don't quite know how that works. And it's not just that. I would add one other area. It also is technology. Sometimes there's some technology that needs to be done.

Well, I can speak for -- talk to any major bank or any major company and say you have to get on their technology priority checklist, you know, go talk to their technology department and to some extent it's either who screams the loudest or, you know, you have a list a thousand long, all critical issues technology-wise. And clearing and OTC, unless there's someone screaming in that guy's ear every day, may stay 50 on the list for a long time.

CHAIRMAN WOOD: Even if you've got up to 20 times the amount of collateral in somebody else's hands than you really need to have? That doesn't scream loud enough to get in the top ten?

MR. GOONE: I would just say once again, focus within the organizations, depending on who you talk to,

there's certainly people screaming like that, but you don't see it uniform throughout the organizations. At least that's our experience.

CHAIRMAN WOOD: Quite frankly, it's our hope of getting all you guys starring roles on FERC TV that at least somebody will start to ask questions at the top.

MR. STEWART: I endorse what David said, but there's also an issue of dividing liquidity. I think John Davidson this morning mentioned that if liquidity gets divided across a number of different clearing solutions, that could be a bad thing.

So there are several viable clearing solutions. I think at the Bauer School on Monday it was mentioned that people think optimally, maybe not only one solution but perhaps two at most would be the optimal number of solutions so that liquidity doesn't get divided too much. But I think there are a lot of FCMS that will be sitting on the fence until they see which solution will be the one that it goes to. And maybe that's where a nudge could be used.

CHAIRMAN WOOD: I just hate seeing -- just a natural reluctance to see folks on our side of the fence pick the winner. Somebody back there thought Beta was a good way to do videocassettes.

(Laughter.)

CHAIRMAN WOOD: Yes sir?

MR. WOLKOFF: I think that it would be a mistake to require markets that have to go to clearing. I think there's some impediments to that. I think one is that the clearing mechanisms that have been effective with respect to energy are using an intermediated model, and intermediation is not appropriate for everyone.

So I think that clearing could, or mandatory clearing, could, one, raise costs above what they need to do, and two, bring unwanted risk into the system that perhaps couldn't be appropriately managed.

I think with respect to power, there are significantly greater issues than just the credit issues. And I think that that market really does need to develop more competitiveness and a more robust cash and derivative market. And I think at the end of the day, companies that use risk management tools appropriately will thrive and survive, and companies that don't won't. And we think that's generally been a pretty good model over time for the way this should really be self-enforced. So we would not be at all supportive.

Certainly I think the types of recommendations where the natural gas assessment report that the FERC Staff came out with, which does recommend that the efforts of the various clearing organizations be encouraged, I think that's all good. I think companies can be encouraged to look at

it.

I think on the point you raise, well, why wouldn't a company want to cut its collateral cost? Part of the reason is that the traders making the trades don't have those collateral costs charged to their P&L in many instances. And so the way the companies are set up is not encouraging the actual trader to look at collateral, and the CFOs are perhaps not sufficiently sophisticated to understand that the trader has a perverse motivation as to how and where he does a transaction.

I think things like that are important issues. And I think we've been to the same meetings, because there is a certain amount of head-banging where you walk in and you can't understand why this isn't immediately embraced. And we've been fortunate, as David has, in that our models have worked pretty well.

They could be better. But there's not necessarily the built in competitiveness and power where if just have utility trading with utility, credit may not be such an issue. And with respect to other types of risk, the chief executive types, the CFO, the office that's responsible for the company overall, is perhaps not as aware of those issues as they could be.

MR. McELHENIE: Chairman Wood, I'd just like to add, first of all, I don't have nearly the experience as my

colleagues up here. So while I agree with a lot of their points, I couldn't make them on my own.

However, I have had the opportunity in my career to develop a number of successful businesses, and that has forced me to take a look at the challenge here by going back and taking a look at what's been done historically and why it's been done and what I call the value proposition.

And as near as I can tell, one of the things that's come up a lot today is the issue of liquidity -- something that this market would like to have a lot more of. And from what I've been able to research, the reason that the markets that are existing in the United States are so robust right now is because of central counterparties, because you could not have nearly the volume of trading occurring in these markets without multilateral netting. And certainly the volume of trading adds to the liquidity.

I would also echo what Neal just said, that there are certain rules and regulations that are standard across all participants that are imposed by clearing organizations. Simple example: Mark-to-market. Whether you agree with the price or not, it's the same benchmark for everybody. Everybody's getting marked to the same point. And that does add credibility to the marketplace as well as reduce risk in the marketplace.

What I see as the fundamental issue is this. The

value proposition at this point is not clear to the people that need to participate in this. We've talked about various pockets within organizations where a trader might know this is good for me because I know how I make money or get a benefit.

But to the organizations as a whole, to the energy merchants and to the FCMs or whoever else is going to serve as a clearing participant, they're not clear right now on what benefit, specific benefit, business benefit they're going to get.

We've talked about it conceptually, but they haven't been able to turn it into an objective or a bottom line yet relative to the costs. Because we did talk about some costs today that would be incurred.

I do believe the benefits are there. I believe that more exploration needs to be done to solidify this value proposition.

In terms of what's the role of government versus the role of private industry, I believe competition is good, and I believe that the ultimate solution will come out of competition, because my colleagues and I will be forced to put a value proposition in front of the people that are being asked to participate that justifies itself.

However, we've also talked about the need for some degree of standardization or homogenization of the

requirements. That's where I think that the Commissions can help, because they can help guide the industry to some standard set of rules or policies by which they see they should govern their markets, which can then in turn be turned into solutions by the people that are sitting at this table that have value.

And I quite frankly think that although we'd like to have a very quick resolution to this as you yourself pointed out, we have some very aggressive timeframes. You were talking about this on Monday. We need to be committed for the long haul. Because, you know, this will die a thousand deaths, and we just need to keep resurrecting it, keep overcoming the obstacles.

But fundamentally, to get this industry to accept the clearing proposition, the clearing proposition has to have value, and I think all of us in this room are trying to figure out exactly what that value is.

CHAIRMAN WOOD: Neal, while I've got you here, in NYMEX, I know you've got some power contracts. What happened and what is happening with regard to that as far as on the exchange side of NYMEX?

MR. WOLKOFF: We might need a couple of days for this explanation.

(Laughter.)

MR. WOLKOFF: But the long and the short of it is that in 1996, we launched two successful power contracts that were actively traded, and we oversaw hundreds, if not thousands of power deliveries. One was Palo Verde and one was California-Oregon Border, and when the California Pool was implemented, the ultimate competitiveness of the market, we believe, evaporated. The forward nature of the market was, in most instances, outlawed.

Since it was a day-ahead or an hourly market, participants weren't permitted to buy and sell on a forward basis for a reason I'm not quite clear on to this day.

(Laughter.)

MR. WOLKOFF: I'm sure there was a good reason at some point.

CHAIRMAN WOOD: My, my, my.

(Laughter.)

MR. WOLKOFF: It's comforting to know that one of the principal proponents of that mechanism previously was a

star and producer in the Killer Tomato movie, which has become a Thanksgiving staple around my house.

(Laughter.)

MR. WOLKOFF: A piece of good news, however: NYMEX has been working closely with PJM, the market oversight people, who have established a very well regarded pricing mechanism that's independent of the market. It permits us to have a cash settlement contract which avoids the various delivery issues that sometimes bog down these discussions of whether something should be cleared or not.

And within the near-term, I believe there may well be an announcement within the next day or so, but I'm not free to give a time schedule, but in the near-term, NYMEX plans to reintroduce PJM as a cash-settled contract on the trading floor, which is as open and competitive and transparent as you can get.

We're putting a lot behind it, and we are, of course, hoping that that is successful. We're introducing a monthly contract, a weekly contract, and several daily contracts at once, trading monthly and weekly on the floor, daily on an electronic trading platform.

Of course this, right now, is subject to CFTC final review and approval. Part of it has been submitted, and I believe whatever is left is going to go through a formal review and evaluation process, as opposed to putting

it in place and doing that without a regulatory oversight.

CHAIRMAN WOOD: Thank you.

COMMISSIONER LUKKEN: I just had one question, and it sort of is derived from the question that Chairman Wood asked, talking about mandating clearing.

It seems to me that part of the problem for the over-the-counter market is it's such a broadly-defined term that deals with very individually-negotiated swaps or plain vanilla standardized products. So I think it's difficult for policymakers to try to mandate for clearing, simply because it's a square peg in a round hole sort of idea.

But I do think there is a subset of the over-the-counter market that lends itself to the clearing model, and I'd like to dive a little more into that area, as to what types of characteristics do you think you look at as far as the over-the-counter products that you think fit that model better?

You sort of have touched upon them today, liquidity being one of them; standardization of terms being another; maybe delivery, how frequent these products deliver. Also you talked about being able, statistically, to be able to monitor how sort of price movements in these models -- so is age a consideration, of how long these products have been trading, so you are able to statistically look at that.

So, if you wouldn't mind, Neal, I know you guys have listed several products. I'll specifically pick on you, but others can join in if you have thoughts on what types of characteristics there are, and maybe we can narrow down the subsets some.

MR. WOLKOFF: Yes, we have listed 57 in power, natural gas, crude oil, and products. And generally what we're looking for is something that has a relatively high level of liquidity in the cash market or over-the-counter market. There is really no point in clearing something that no one is trading.

So, while you have all kinds of issues as far as pricing it, at the end of the day, if nobody is using it, those issues tend to go away, so why do it in the first place?

You also look -- if it's a physically delivered contract, that it's a reliable and efficient delivery mechanism; that it's gained the trust of the market participants, and that the information flow is available. If it's not physically delivered and you're going to price it against the cash reference, you need to have a readily-available cash price that also has gained the integrity that it's accepted by sufficiently large numbers of the market that you're replicating what's already trusted.

The market needs to have a certain amount of

volatility in it, otherwise, protection on credit risk doesn't really make as much sense, and, of course, it does need to be highly standardized, and there needs to be a willingness on the part of the marketplace, as they submit their contracts, which may be privately negotiated, to agree to have standardized terms and conditions as to what is clearing.

It happens in energy that the structured type of contract, the contract that might have four embedded options -- I'll sell you the power, but if I want some of it back on the third week on non-peak hours, then I can get it back at this price, they've tended to go away.

Most companies now are not really that interested in explaining non-explainable trades to management and the board of directors, and so what we've seen, even post-Enron, is an expansion of standardization in the over-the-counter market. And that would include both purchase and sale of the cash commodity and derivative transactions occurring, swap transactions occurring over the counter.

Those would be my major criteria. I am sure that if one of our economists was here, they would probably be kicking me for leaving something out, but that's basically what I would think of as most important of all.

COMMISSIONER LUKKEN: And could you go into a little bit on the standardize question? It seems to me that you have mechanisms in place to convert less standardized products to more standardized products, the exchange for physicals and exchange for swaps. Can you talk a little bit about that and how --

I don't understand the mechanics of it, but at least explain how there is a mechanism in place.

MR. WOLKOFF: Well, what we're saying is that you may have -- two parties may have done a transaction, and it may be a relatively standardized transaction, but there may be segments of it that are highly negotiated. Generally, in energy, those highly-negotiated pieces of the transaction relate more to payment than they do to anything else.

However, they can relate to certain types of grade differentials that might be above and beyond what we would consider to be standard. They may have locational choices that we would not necessarily look for in a standardized contract.

And what we say is, if you want to clear that contract on the exchange, then you must convert it and agree

between each other that those terms are extinguished and new terms that meet our standard terms and conditions are going to be the terms between the parties, because that's what we're going to clear.

We need to be able -- as John said before, the risk has to be measured. You can't measure the risk of each contract differently, and in the event that a participant needs to have a contract liquidated, a clearing member needs to liquidate the position, it's tricky enough liquidating an OTC position. It's even trickier if you're saying go out and liquidate a non-standardized structured instrument where you have to find a particular counterparty that would be willing to take that off your hands at an unmeasurable market value.

So, it's not that participants are necessarily doing things that are far out or really away from standard, it's just that it may be slightly different. And we're saying that you can do whatever you want, but if you've done it that way and you want it cleared, you need to agree to these new terms.

What we're seeing is that there are participants now that are doing transactions precisely on NYMEX terms. Many cash market transactions, anyway, are done on NYMEX terms and conditions. Even in contracts that we barely do any business in, like coal, has become a standard of the

industry, NYMEX terms. Before we listed it for trading, they were trading NYMEX terms outside of the market.

So parties might be doing business or are doing business now at NYMEX terms and conditions, and wanting to submit it for clearing, and they agree that they're doing it and they want it to be cleared; they don't negotiate all of those various pieces; they are content with the idea that, you know, this is an industry standard.

So it has brought even more standardization, I think, to various market points. Some points we're doing nothing in, and, therefore, we've had no effect, I presume, but some points we're doing quite a bit in, and I think it's affected market behavior to some extent.

MR. GOONE: I would just add, just quickly on the product side, also the issue is, which was alluded to earlier, is it's kind of like insurance. A lot of the clearinghouses will clear a product; it's just a matter of at what price. So certain products may be so volatile that clearing won't suit because it will be more than 100 percent of the value of the contract, for example. And I have seen instances of that in the past where you're putting up more than the value of the contract on a daily basis and it doesn't seem like it -- you know, yes, one of the clearinghouses will clear it, but it doesn't seem to be of much economic benefit.

The other thing I would say in regards to the more structured products, I'll just kind of give you my overview and how we approach things at times. The clearinghouse can clear what I call bricks, and we at Intercontinental Exchange or in the over-the-counter markets can build houses out of the bricks, and as long as they break down at the clearinghouse level into the bricks to clear and those bricks are fairly liquid, you can develop products in that manner.

And that's the kind of approach we have done before, and we can continue to do. So I wouldn't say that we can't do structured products; the trick is for us to break them down into basic building blocks or bricks when it hits the clearinghouse, and have those bricks be subject to be available to be liquidated in a manner.

So we kind of do things that way without getting into too specifics, so you can build a lot more complicated structures than one would think at first blush on how you do it, whether we do it electronically as how we list it on ICE and break it down in the clearing system, or whether it's done structured between two parties, either a voice broker or directly.

MR. McELHENIE: I would add one other thing to what Neal has said, and while we certainly don't have the experience that NYMEX does in OTC markets, we are looking at

a lot of them right now. One of the things we believe is important is looking for markets that have some degree of correlation.

As an example, I would give you energy and chemicals. And to the extent that people are active in both markets, a clearing solution can then start to provide real benefits to the extent that offsetting positions can get some relief on margin because they are correlated, whereas if those markets are not being cleared, you're putting up margin for both positions, and not making the most efficient use of your capital, so I'd say that's also a consideration.

MR. EARLE: I think we have to be careful. I think that if we assume that standardization is the goal, then probably we're committing merchant energy companies to, as my colleagues correctly point out, clearing for intermediation.

Today, they basically have a nonstandard market, and I don't think the act envisions that they have to standardize to get the protections of clearing corporations under the CFMA. So I think that to be consistent with what the Act's intent was, my understanding is that if a clearing corporation can be constructed according to the generic principles that afford the merchant energy company the protections that are acceptable to them, for the market the way they want it organized, there's nothing in that that

requires standardization or intermediation, and any attempt to do that, I think, is actually making a public policy decision that is somewhat different than what the Act envisioned was the role of the clearing corporation.

So, I think, you know, if the market decides they want to be standardized and want to be intermediated, they can do that. I think if they opt not to be standardized -- and the next panel can answer this better than we can, because they are the market -- that if they want not to be standardized and they want the ability at the same time, the protections of a federally-registered clearing corporations, then the CFMA envisions that without any alteration to their market structure, which, quite frankly, works, because if you flip the switch, the lights come on.

So, something in their market today seems to be working well. Do we have to solve the credit problem by altering their market structure? And I would contend that a) they'll tell you now; and b) I don't think the CFMA requires us to.

So, I think that we need to go back and be very careful about how we envision we will apply clearing under the Act, that market, the way they want to trade.

COMMISSIONER BROWN-HRUSKA: Actually, Dennis, I was looking for a question to ask you to elicit that response, exactly. I agree with you completely.

I think that that's probably what Pat is after, and I think that we have to be very flexible in our approach.

MR. EARLE: I think that what we did, in a way, was that we came to the party with a classic solution, and said to the merchant energy companies, how lucky you are that we are here to clear for you. I think they have their own market, and it operates really well.

They had a problem, and that problem, Enron, resulted in a death spiral of ratings and they have a credit problem. We can solve their credit problem without changing their market structure, and I don't think we should impose upon them, a different market structure, just because we think it facilitates intermediational clearing.

They don't need that to solve their credit problem. I think we're not here to solve the problem of the FCMs; we're here to solve the problems of the merchant energy companies.

COMMISSIONER BROWN-HRUSKA: What features of a clearing market or a clearing model do you think would attract the merchant energy companies?

MR. EARLE: Since we have done significant research on their buying factors, I think we now know a lot more about it than we did nine months ago.

I think we were very slow to react to the post-

Enron environment. I think Enron and all the layoffs and cuts changed their buying factors over time, and I think that today, they still in many cases remain amorphous.

I think that in many cases -- and we were at this Bauer Institute meeting of Monday of CEOs. There were 35 CEOs and when they were asked how many companies thought clearing would help their company, five hands went up and three of them were clearinghouses.

(Laughter.)

MR. EARLE: The Chairman did not vote.

(Laughter.)

MR. EARLE: So, I think that there is still -- it's like deer stuck in the headlights of a car. There's a paralysis of action and it is not to them, a self-evident answer.

I think we do know and I think your sister Commission, the SEC, did significant work with this, with Participants Trust Company, that we can benefit by.

CHAIRMAN WOOD: Number one was good, number two was good. You can just take a bow. I hope we can match it. Any other thoughts or questions?

(No response.)

CHAIRMAN WOOD: Wonderful. We'll take a short break before the last panel.

(Recess.)

CHAIRMAN WOOD: We'll go on the record and start with our final panel of the day, and turn it over to Bill Hederman.

MR. HEDERMAN: Thank you, Mr. Chairman. Our third panel today is drawing a broader net in terms of credits solutions and how they might be implemented. And we have a variety of participants, both persons from the energy industry and also from associated areas that we hope can help work through this credit problem.

I'd like to begin with PJM, and if Hal Loomis, you could share your remarks?

MR. LOOMIS: Good afternoon, Chairman Wood, Commissioners, and ladies and gentlemen; thank you for inviting me here to speak with this panel.

(Slide.)

MR. LOOMIS: I address credit issues from an RTO's perspective, using PJM as an example. The role of an RTO is different from that of other members of the energy community, so I expect you'll see some differences in my presentation from those in other presentations today.

PJM is an RTO that operates a full set of markets. The markets are operated without profit for the benefit of the members.

Our membership is comprised primarily of market participants of varying types that have been pre-qualified

to participate in the markets, as well as other interested parties that are not active in the markets.

Cost of credit within PJM is borne by each member individually, whereas any default is passed to all the members collectively, using a predetermined formula. PJM does not own the energy, but is merely a conduit for the energy in the markets.

Our diverse membership with competing interests, makes consensus agreement on credit policy issues very difficult. PJM bills monthly and settles on the 20th of the following month, so credit exposure in PJM can reach up to 60 days of activity.

It could even be more than 60 days also, because sometimes we have activity from providers of last resort and it's difficult to terminate a member that physically withdraws energy from the grid.

In order to deal with our credit issues, PJM relies on our credit policy, which was developed through a stakeholder process. Because PJM credit exposure is primarily from the spot market and not from forward positions, PJM looks at historical activity to determine a member's credit requirement, which is two months of historical activity at this time.

PJM performs a financial evaluation on each member, and establishes unsecured credit or establishes

collateral requirements, if needed. And, of course, PJM continually monitors member activity to assure that no member exceeds its credit limit.

There are four key issues that PJM would like to raise for this conference: The first is the issue of precipitous credit downgrades. If any unsecured credit is granted to the membership, it is difficult to then protect against the member that undergoes rapid credit deterioration. This is due to the preference periods and bankruptcy law.

The second issue is the cost/risk tradeoff for our members. Our members and most likely participants in other markets have two competing interests: One is the desire to minimize the cost of providing collateral, whereas the other is the desire to minimize the probability of incurring a cost due to having to cover a default.

In conjunction with the risk of rapid downgrades, that leads to the issue debated within PJM of whether or not some minimal level of collateral should be required of all members.

MR. HEDERMAN: Excuse me, Hal. In light of our visitors from the CFTC, could you take a moment to explain your membership, just so they understand which companies you're talking about?

MR. LOOMIS: Okay, the membership in PJM is --

there are many different sectors. We have providers of last resort and load-serving entities. They are the ones actually delivering power to the customers.

We have power marketers. We also have some interested parties like large industrial users that are not active in the markets. We also have state commission representatives and other interested parties as well.

I'm trying to think if I left out anybody, but it's a diverse membership. If you want to or if you're going to deliver energy in the territory or in PJM's footprint, you need to be a member of PJM in order to do so.

And so it's a requirement for companies to be members of PJM in order to do certain types of business. But to be members of PJM, they also have to comply with the PJM credit policies.

(Slide.)

MR. LOOMIS: The third issue is the issue of providers of last resort. A provider of last resort is the company that is responsible for delivering energy if other means of delivery have failed such as a load-serving entity has gone bankrupt or something. We can terminate a load-serving entity that has credit problems, as long as there is a provider of last resort to backstop that.

We cannot, however, terminate a provider of last resort without FERC review and approval. Because PJM cannot

take unilateral action against the provider of last resort, our exposure period with them is much longer than with a typical member.

And our last issue as to do with the multiple markets within PJM. Actually, this applies to markets outside of PJM also.

Each market design requires a credit design that fits it properly. It is not necessarily a one-design-fits-all solution for all markets.

There's no solution that provides zero risk at zero cost for our membership, but PJM has taken certain actions: First, through an 18-month stakeholder process, PJM implemented more stringent unsecured credit criteria.

PJM has also engaged Deloitte and Touche and Standard and Poor's to review our credit policy and procedures. Deloitte and Touche's engagement was part of the stakeholder process that developed our current credit policy.

Standard and Poor's recent engagement was to review our policy and practices as a whole, and is coming to an end and the findings should soon be reported to our Board.

PJM still has a set of open issues, however, to be vetted through our stakeholder processes. Those include consideration of a shorter settlement period, insurance as a

possibility, and the possibility of minimum collateral requirements from all members.

Competitive wholesale markets are now successfully operating within PJM and elsewhere, but with the creation of these markets came increasing credit risk. Government and industry need to work together to address the credit issues that face us today.

Together, we need to formulate solutions that will reduce the risk of open market defaults, that will stabilize or reduce costs of providing collateral, and that will solidify confidence in providers of last resort.

PJM is open to any initiative that will reduce risk and increase liquidity in all markets, including bilateral and other energy marketplaces.

Thank you, and I look forward to answering any questions you may have.

MR. HEDERMAN: Thank you. Our next speaker is Ed Comer from Edison Electric Institute, and I understand that we'll be getting some of the details of the problems of creating standardization in your industry.

MR. COMER: Thanks, Bill. I'm Ed Comer, Vice President and General Counsel of Edison Electric Institute. For our CFTC friends, we're a trade association representing shareholder-owned electric utilities, affiliated and independent power producers, as well as their trading,

marketing, and risk management activities.

At first, I'd like to commend both Commissions, FERC and CFTC, for jointly addressing this very critical issue of credit and the need to alleviate the current liquidity problem. I think this has been a great technical conference and appreciate your holding it.

I would like to comment on a remark that was made this morning. I think, from my familiarity with the CEOs in our industry, they are very, very concerned about credit issues, and it has their personal and direct attention.

I think that in commenting on the remarks of the last panel about some of the reasons for possibly the lack of responsiveness they think they have gotten from some of the utilities involved, I think it's important to recognize that most companies, most major trading companies are clearly reassessing their business models right now.

They are in a time of retrenchment, and I think, particularly in response to FERC's standard market design activities, to shape the nature of the markets is also in a time of retrenchment and refocusing, and both of those will have a direct impact on what activities companies are willing to undertake right now, particularly in longer-term transactions, since there is some uncertainty as to what those transactions will be.

What I'd like to do first is address the

importance of standardizing contracts in this business, and go on to talk about what these Commissions can do to assist the credit issues, and talk about and support further necessity of coordination between FERC and the CFTC.

The need for standardization of contracts only became obvious in the late 1990s in the electricity industry with the wholesale market disruptions caused by the city of Springfield default in the Midwest.

When companies trying to unwind their transactions discovered that their contracts, which they purported to sell the same product, were really different in very critical terms. This was just four years ago.

To address this problem, EEI began work on a standard form contract for wholesale electric transactions in early 1999. We convened a working group of representatives from our members, independent power providers, traders, marketers and members of the National Energy Marketers Association. We made a special outreach to public power and cooperatives as well. Public power in particular has very unique credit issues often due to restrictions on government entities and what they can do about credit issues.

The process was open to all interested participants, it was conducted very publicly, with many meetings in Washington and Houston. The process was consensus-driven.

The EEI NEMA master contract standardizes the confirmation process, defines obligations and delivery. It provides consistency in key terms. It defines different

electric products. It defines remedies and articulates credit protection practices.

One of the issues that we had particular difficulty with was reaching consensus between those with a physical and a financial perspective on their business activities. And I think that was represented in today's discussions about all of the concerns people raised about delivery issues. Physical delivery issues are extremely important to utilities that have load-serving obligations. And the financial folks who approach this effort with primarily a financial perspective learned a lot about the physical delivery issues.

The process was difficult. We addressed the differences between physical and financial, largely by developing different products with different degrees of firmness and different treatment of transmission issues, who was responsible for transmission issues, delivery, and who was responsible for constraints.

The definition of force majeure was hotly debated as well to address these issues. You know, a question the FERC folks will be familiar with is was a NERC required TLR a force majeure or not, and who would be responsible?

The master agreement includes six precisely drafted --

CHAIRMAN WOOD: What's the answer?

MR. COMER: Well the answer was we gave the parties the option to negotiate that, all right, and that could well affect the price and everything else. But we at least tried to define the terms for them.

Like any form agreement, however, the parties are free to customize this to meet their particularized business objectives. By the way, I should say we agreed on New York for choice of law as opposed to Texas, largely in deference to the financial community, because that's what they're used to.

EET's role throughout the process was that of a neutral facilitator. We were helped by the fact that every company could use the agreement either as a buyer or a seller. And so there was an incentive to develop a neutral, fair standard agreement.

The first master contract was released in the spring of 2000, less than three years ago. It's readily available for free on our Web site as well as NEMA's, and it's published in the Energy Law Journal.

We are pleased that the contract has been widely accepted throughout the industry, including by many of the companies speaking here today. But to be quite honest, when we initiated the process, we had no way of knowing who would use it or whether it would gain widespread acceptance. And the only way it did so was because people recognized that it

was fair and neutral and it met their business needs.

Following that effort, we developed a collateral annex as well as an agreement to transition from an "Into-Cinergy" product to a Midwest product in response to the formation of the Midwest ISO.

Now let me comment on that, because that relates to SMD. Prior to the Midwest ISO, the liquid market in the Midwest was "Into-Cinergy". It was defined by a product that was sold into Cinergy's borders, and we had it defined as a specific product in the contract.

When the Midwest ISO was formed, that "Into-Cinergy" product no longer worked because the ISO used a different physical area for what it worked with. We pulled together a consensus group of folks from the Midwest ISO and from the parties that traded that product to define a way to transition from A to B, and I think we did so successfully.

Last spring we sponsored the development of a Master Netting Agreement in response to the current credit issues. The Master Netting Agreement was issued last October. We used the same open and public process, and we gained expanded representation for many financial institutions, which have more recently become active in electricity trading.

Carol St. Clair, my fellow panelist, was an active participant in this process, and she'll explain

netting and the agreement in more detail.

Briefly the Master Netting Agreement is a standardized bilateral contract. It enables trading counterparties to agree to net collateral requirements and in a closeout situation, settlement amounts related to underlying Master Trading Contracts for different commodities. In this business, it basically enables companies to net electricity, natural gas, and related financial transactions.

In other words, the netting agreement offsets positive balances of one transaction with negative balances of another.

Again, we conducted a very expansive education and outreach process, providing background in particular on some of the critical legal issues to consider. And there are some critical legal uncertainties related to bankruptcy I'll talk about in a minute that I think were alluded to in the earlier panel but do increase the riskiness of netting when bankruptcy is a potential alternative.

Let me say, during this process when we started the process, NAESB didn't exist. It was GISB. In the meantime, through other efforts the FERC folks are familiar with, NAESB has established a Wholesale Electric Quadrant, and they have established a Contract Standardization Subcommittee.

We have had several discussions with NAESB and that Subcommittee, and EEI will continue facilitating the standardization effort under the auspices of the NAESB Subcommittee. Just last week they appointed a Master Service Agreement Task Force, which an EEI lawyer will help co-chair, to continue the standardization process.

One of NAESB's top priorities is to further standardize the EEI agreement with the Western Systems Power Pool Agreement. The Western Systems Power Pool Agreement is a filed FERC tariff. It is used by many parties in the West. Many parties in the West also use the EEI agreement. And one of their priorities is to standardize the two and come up with a single agreement.

If that happens, that will be our top priority. If that does not happen, and there are negotiations with the Western Systems Power Pool people right now, we will probably go on and refine the EEI contract. It's been three years. It's time to do a number of refinements.

But we would do that refinement process in the context of working with WSPP if they agree to this effort.

In addition, and Steve Bunkin will talk about briefly, ISDA is also developing a Power Annex, and the EEI contract group has been working with ISDA to make sure that there is full consistency between their Power Annex and our standard contract. I'll leave that to Steve to explain in

more detail what the Power Annex will do.

Among the questions you asked is what can the Commission do? There are two things I would recommend that you can do, one of which you're already doing. The SMD process, and in particular the two aspects of the SMD process that EEI has always been very supportive of, which centralized real time dispatch on a regional basis, and the financial resolution of congestion issues, will go a long way to helping standardize the business both on the real time basis and I believe on the longer-term basis. It will solve a lot of the delivery and settlement issues that were discussed here.

And I commend the Commission for proceeding on those aspects of SMD. I'm sure you're familiar with all our 250 pages of comments, but those two aspects are critical to moving the markets forward and making them more liquid.

The other place where you could be helpful is support for bankruptcy law clarification by Congress. I have attached in my statement and provided to you a Legal Landscape which we published to accompany the Master Netting Agreement.

There are loopholes in the bankruptcy situation that make the protections of netting ambiguous at best if a counterparty goes bankrupt. Last year in Congress, House and Senate negotiators reached an agreement on a bill to

overhaul the bankruptcy laws, and there was bipartisan support for that bill, including provisions that would have addressed the netting concerns. The bill was HR 333.

Those provisions were never enacted, unfortunately, because of completely unrelated issues that had to do with some consumer issues. However, enactment of these bankruptcy law provisions is still very important. And anything that both the CFTC and FERC can do to support enactment of those laws would be very helpful to protect the value of cross-commodity netting.

In conclusion, again, I would like to commend the members of both Commissions for jointly scheduling this meeting. I think it has been very useful and very fruitful, and we would like to encourage continued coordination between both Commissions.

Thank you.

COMMISSIONER BROWNELL: May I just ask a quick question so we're all on the same page? Several people have referred to physical delivery problems. Would you just elaborate on that? Because I'm sure my colleagues at the CFTC read all of this every night, but just to elaborate. Are we talking congestion, or are we talking access? What are we talking about?

MR. COMER: I think in physical delivery problems we're talking, one, availability of the product in the first

place, what happens if the generator you're depending upon to provide electricity is not there for some reason, and is there an alternative. You would certainly look both to alternative sources of generation. You would also look to transmission access. Either or both could be a problem in assuring physical delivery.

The other aspect of physical delivery that I think is unique in our industry is the immediacy of the delivery need, all right. And if you're dealing with stock or other commodities, you may not have that immediacy of delivery need that you have in electricity. And when you put that on top of the transmission constraints, think of what happens if you have a TLR and how that affects delivery. They become very complicated problems.

A lot of the financial players in various markets will be satisfied with money if they can't get delivery. In fact, they maybe in those markets because they're hedging and their interest is primarily financial. There are players in the markets, and again, the load-serving entities that depend on physical delivery.

It's all those problems you've dealt with in transmission and everywhere else.

MR. HEDERMAN: Okay. Carol St. Clair, I think you've gotten your introduction. We look forward to your remarks.

MS. ST. CLAIR: Thank you. Chairman Wood, Commissioners, good afternoon. My name is Carol St. Clair. I'm currently a Director and Senior Counsel with UBS Warburg Energy, whose business involves physical and financial gas and power trading.

I've been a legal practitioner for over 15 years and have been handling energy trading matters for the past four years. As Ed mentioned, I have participated with the EEI drafting groups in drafting the EEI form of Collateral Annex and the EEI form of Master Netting Agreement, which I will talk about briefly in a few minutes.

I also had a role in formulating the proposed Master Netting legislation to the bankruptcy reform bill that Ed mentioned. And again, I will elaborate on that and the need to pass that bill and just echo what Ed said in a few minutes.

During the next few minutes I plan to address the following topics. And I hope that I'm not too basic in some of the terms that I go through, but I think in order to wind up a discussion of understanding why the Master Netting Agreement is important, I think it's helpful just to go through some of the basic collateral concepts that exist in the energy trading market just so we're all talking the same language at the end.

I just want to briefly discuss the role of credit

in the energy trading markets, the mechanics for posting collateral, the role of the Master Netting Agreement in managing credit risk, and what needs to be done hopefully in the near future to encourage more widespread use of the Master Netting Agreement.

In terms of the role of credit in the energy trading markets, it really has drastically changed over the past few years. Prior to the upheaval caused by in part the Enron bankruptcy and other events that happened in some of the physical trading markets, it wasn't uncommon to trade on a completely unmarginated or uncollateralized basis.

It was just at the time the way parties dealt with each other through course of dealing their financial strength and overall creditworthiness was satisfactory. And so credit was not a focal point. I think that was mentioned on one of the earlier panels, that people -- it was not in the forefront of considerations between trading counterparties.

As Ed Comer mentioned, it was only recently that the EEI drafting group saw the need to expand the collateral provisions of the EEI Master Agreement by coming out with a separate and comprehensive Collateral Annex, which is very similar and was somewhat taken from the Credit Support Annex that accompanies the ISDA Master Agreement for financial trading.

This effort came about as the result of the recognition that posting margin is one of the primary ways that trading counterparties can manage credit in this market, and it facilitates the execution of multiple trades between counterparties.

Thus, margining relationships are part of the cost of doing business, both in the physical and the financial energy trading market.

For most if not all counterparties in today's market, being capable of posting collateral is a prerequisite to being able to trade in such markets. And the credit documentation that now exists between counterparties is very comprehensive and complex.

In terms of posting collateral, just some basic terminology that is used in some form or fashion in most of the physical and financial trading agreements. The primary types of collateral that are used in the energy trading markets are cash and letters of credit. Sometimes securities are also used but primarily it's cash and letters of credit.

In the trading world, there is a concept of exposure which measures, which is similar to measuring the principle and accrued interest on a loan. Exposure in simplest terms is just the net amount that would be payable to a party that is in the money on a net basis after taking into account and assigning a value to all trades that are done between two parties.

Exposure really can have two components to it. One is the current receivable that might be due under a trade, and then the second component is establishing some type of future value for the duration of the trade. Its trade valuation is a very complex process. I think in the prior panel it was discussed somewhat how trades are valued but suffice it to say that for credit purposes all trades have to be valued on a net aggregate basis in order to come up with a net exposure.

The second concept for posting collateral is a collateral threshold which is basically the amount of

unsecured credit that a party is willing to extend to its counterparty based on such counterparty's financial strength and creditworthiness. This is basically the amount of exposure that a party is willing to have to its counterparty on an unsecured basis.

A higher threshold results in less collateral being posted and at times, and in most agreements now, a threshold will move up and down depending upon the creditworthiness of the counterparty.

For counterparties that have a credit rating, the collateral threshold is tied to the credit rating of the counterparty and downward changes in a party's credit rating would cause the collateral threshold to go down which would mean that the party would need to post more collateral.

This is one of the reasons why there's a liquidity crunch when a party's credit rating begins to fall. First you have a credit rating drop, then that results in increased collateral calls from counterparties, more cash collateral is needed to send to counterparties, and then you have less cash to conduct your business which you need in order to restore the credit rating.

Thus a party's ability to post collateral is really dependent upon the amount of cash liquidity that a party has, either through selling assets or through lines of credit from its lenders.

In the traditional financial and physical trading markets, posting collateral is usually done on a master-agreement-by-master agreement basis. For example if gas trades are done under a NAESB, power trades are done under an EEI master agreement, and financial trades are done under an ISDA, in the traditional model posting collateral will be done separately under each of those agreements.

So if a party would trade physical power, physical gas and financial derivatives, that party and its counterparty would be subject to three separate margining provisions under three separate master agreements.

(Slide.)

In the example under the traditional way, where we have an ISDA, an EEI, and a gas master, you can see that under the traditional model under the ISDA, party B would post \$50 to party A. Under the gas master, party A would post \$20 to party B. And under the EEI master, party B posts \$100 to party A.

As Ed mentioned, in the spring of 2002, the EEI drafting group undertook an effort to put together a master netting agreement which is available on EEI's website for free. Accompanying the master netting agreement is a very comprehensive users guide similar to the users guide that accompanies the ISDA as well as a legal landscape memo which addresses certain important legal issues that parties may

need to consider in entering into a master netting agreement.

The master netting agreement serves a number of different purposes but its primary purpose was to facilitate the posting of collateral on an aggregate net exposure basis based on all the trading relationships that a counter party might have.

If you look at my example, under a master netting agreement, if you were to aggregate all the exposures and assuming a collateral threshold of \$50, if party A and party B entered into a master netting agreement, and they put the ISDA, the gas master, and the EEI master under the master netting agreement, the end result would be that party B would post \$150 in the aggregate to party A. Oh, I'm sorry, it would post \$130 to party A.

Thus by using a master netting agreement, each party would save twenty dollars. Again, this comes out as a result of being able to aggregate both across physical trades as well as financial trades the exposure and being able to come down to one net aggregate exposure and based on that net aggregate exposure, that is how you post collateral.

Now it all sounds a little bit too good to be true. And to a certain extent it is. One of the areas that any credit manager is going to be concerned about is making

sure that it is clear what happens when its counterparty declares bankruptcy. The good news is that currently the Bankruptcy Code does have very favorable safe harbor provisions for trading contracts which generally allow a party to a trading contract that it has entered into with a party that has gone bankrupt, to terminate that trading contract, to enforce its rights with respect to collateral, all without having to get permission from the bankruptcy court. And this is something that can be done right after the bankruptcy filing or within a time period shortly thereafter.

The issue that Ed mentioned with the Bankruptcy Code as currently drafted is that because the safe harbor provisions are dealt with separately. Physical contracts, what we call forward contracts have their own set of safe harbor provisions. Financial contracts, swaps, and the like have their own set of safe harbor provisions. It's unclear at best as to whether or not you can what we call cross product net and that is net physical transactions against financial transactions.

I'm saying it's unclear because there are good arguments to support that you can, for those counterparties like the UBS Warburg. That is very conservative and reads the Bankruptcy Code literally. They just don't want to take the chance. The chance, the risk of posting collateral

based on a net aggregate exposure and being wrong about that when your counterparty declares bankruptcy is a risk that no credit manager wants to take.

That is why the Bankruptcy Reform Act and particularly the master netting legislation that is part of that is very important. What this legislation did basically was to create a new defined term in the safe harbor provisions called a master netting agreement. And basically if you satisfy the criteria for a master netting agreement and as set forth in the code, then basically you have all the same protections with respect to that agreement that swaps and forward contracts currently enjoy as the Bankruptcy Code is currently written.

So clearly once this legislation is passed, people will feel a hundred percent confident that they could net physical and financial transactions under a master netting agreement because the very thing that we've created would now be a defined term in the Bankruptcy Code.

As Ed mentioned, unfortunately the Bankruptcy Reform Act I think as most people are aware has been bogged down over the past two years by unrelated consumer issues and it is really my hope that both the FERC and the CFTC and their staffs can do something to encourage and enhance the likelihood that at least the master netting legislation will be passed in the near future.

I really appreciate the opportunity to speak in front of you today. I think these issues are all very important issues, but I think we're also making very good progress and as, you know, Ed mentioned the drafting groups by the EEI and the NAESB is really a joint effort. It's not just one participant leading the way, it's really a consensus effort to produce quality document which I think the master netting agreement is. Thank you.

MR. HEDERMAN: Thank you. Mr. Bunkin, could you give us ISDA's perspective on the power annex and related matters?

MR. BUNKIN: Sure, sure. Thank you. Good afternoon Chairman Wood, Commissioners everyone. My name is Steve Bunkin. I am an associate general counsel at Goldman Sachs/J.Aron. Goldman Sachs is among other things a registered SCM, and J.Aron is a certified power marketer, so we are familiar with both markets.

I'm delighted to be here today to talk about issues relating to OTC trading in the energy markets. I'm going to kind of amplify on some of the things that Ed and Carol discussed this afternoon.

I'm appearing on this panel in my capacity as co-chair of ISDA's North American Energy and Developing Products Committee. ISDA, as many of you know, is the International Swaps and Derivatives Association. It was

formed back in the late 80s by swap market participants in order to standardize trading terms in the swap markets.

Since its inception, it has grown both in the size of its membership and its mission to develop standards across various markets. Of particular interest to this group is the fact that among ISDA's membership are a number of different energy market participants including producers, IPPs, energy merchant firms, utilities and so on.

And the Energy and Developing Products Committee has been focused on a number of issues of importance to market participants in the OTC trading realm. We heard this morning and this afternoon a fair bit about developing standardized contracts and clearing mechanisms as a way to alleviate the credit concerns that are facing the markets right now.

I'm going to focus on bilateral OTC trading, and some of the issues that are currently confronting market participants in that area.

I think that it's going to be important to address these concerns as they relate to the bilateral OTC market because this market is going to continue to be important insofar as people are going to require customized products of greater size and duration than may be offered in the cleared context.

It is still the case that utilities will put out

RFPs to merchant energy companies to serve load, and that is, by definition, a customized variable quantity product that is not readily reduced to a standardized form. So I think focusing on the OTC markets and the issues that are confronting the OTC markets uniquely is very important and that's why I think this conference is very helpful.

I want to spend a moment to kind of describe the challenges that we're facing in the OTC markets in relation to what I'll call the products that are traded with respect to various commodities. And what I mean by products are financially settled, fixed or floating swaps, physically settled forward contracts, financially or physically settled option contracts, spot contracts. These different products are traded on a range of commodities including power, natural gas, crude oil, crude derivatives and so on.

And although you can call these transactions products, as being distinct from each other, the fact of the matter is they all have the common characteristic of generating credit exposures that are based on market forces, volatility and price. And by the same token, even though they share this common characteristic of generating these types of credit exposures, for historical reasons they have kind of grown up in silos and have been traded under industry sector specific documentation, some of which we've already discussed.

And for many years, this really didn't make a difference because there wasn't an overlap of the people who were trading product A with product B, or the firms themselves who would be trading these products. But as the markets have developed, there is an increasing overlap of firms that are trading physical natural gas and physical power and financially settled versions of both of those types of products.

And I think that's a trend that is going to continue, particularly in light of the SMD initiatives where financially settled power transactions are going to become more and more important.

And the result of that trend is that we have a proliferation of different types of master agreements that don't interrelate with each other in any coherent way so that there is unintended risk that the counterparties to these same credit generating transactions face to each other that could have otherwise been mitigated if only those documents were speaking to each other.

And I'll use a term that somebody in another market with a similar situation used to describe this phenomenon. He described it as multiple agreement disorder or MAD. Because what we have is an alphabet soup of ISDA, EEI, GISB, NAESB, WSPP. If I went to Europe I could add to the alphabet soup, but I'm not going to do that.

And so what we're facing is just a proliferation of agreements that are inhibiting the ability of parties to net the exposures that they have to each other that are creating a drain on resources to document transactions because if you're adding a new flavor of product to the range that's within the framework of an existing trading relationship, you have to come up with a new master agreement to do that. And it's just becoming an untenable situation.

(Slide.)

Fortunately, I think market participants are beginning to recognize this and a number of initiatives have been undertaken through various industry organizations to deal with it. And I think the fact that we're discussing these issues at this conference is going to give greater momentum to these initiatives which is a great thing.

So what needs to be done? I think what we need to do is come up with solutions that reduce the strain on resources in getting these documents in place to make sure that we have the credit framework to enable OTC trading to go on while at the same time promoting greater efficiency in the usage of what are more precious credit lines for bilateral counterparty trading.

These solutions need to do a couple of different things. They need to enable parties to close out

transactions, whatever kind of transactions upon the occurrence of a default, so that if there is a problem with your natural gas trading, that should trigger an ability for you to protect yourself on your power trading. That being said, you have to give recognition to the fact that there are certain unique attributes of natural gas trading and the way that market works that need to be reflected within the context of market practice. So you don't want to have a precipitous hair trigger that would cause a collapse of an entire trading relationship.

But once you have made the determination that a credit event has occurred such that you would be permitted to close out your natural gas transactions, then it should naturally follow that you would have the ability to have a closeout across all of your transactions. I'm just using an example. So one thing we need to have common default triggers.

The next thing we need to do is promote the ability to net across these different products, as Carol was describing, and on the strength of that netting ability, develop the ability to margin across these different types of products because having the ability to net is going to be a pre-condition to your desire or your ability to margin across different types of products.

That being said, I think that when we craft these

solutions, we have to recognize the fact that a number of counterparties are where they are and that we can't superimpose a one-size-fits-all solution to deal with the range of scenarios that counterparties may be facing. And so what you have to do is develop things that will be modular and be implementable within the context of an existing situation.

And I'm going to talk about a couple of initiatives that do that. I guess we can go to the next slide.

(Slide.)

The first thing I'm going to mention is the Energy Bridge which was published in 2002. And what the Energy Bridge was designed to do was to deal with the situation where the counterparties had more than one master agreement they were trading different types of products under, and one of those master agreements happened to be an ISDA, and what the ISDA bridge does is it gets those two different or more different agreements that are between the same entities, and it links them together so that they're on speaking terms, and that an event of default under one would constitute an event of default under all, thereby forming the basis under which the parties could cross product, net and cross product margin.

The ISDA bridge was designed to be something that

would respect the terms of the product specific master agreements so the way that it works is it allows the closeout of the relevant products to be done in accordance with the terms of that product specific master agreement, and then once that closeout has been done, then the IDA bridge engine, if you will, goes into effect and it takes the netted amount under one agreement and it implements it into the ISDA agreement to come down with yet a further netted amount that reflects the netting across the product specific agreement and the ISDA master agreement.

The ISDA bridge is also readily available on ISDA's website and I've included the coordinates on my presentation. So that's one thing that we've done.

The other thing that's been done, as Carol and Ed have mentioned, is the EEI master netting agreement which essentially accomplishes the same purpose except that within its framework I believe it contains the ability to margin, and it is more detailed in terms of the various elections that the parties can make to deal with different issues that come up in the context of netting across products.

So these are two initiatives that deal with situations where there are more than one master product-specific agreement and it brings those agreements and links them together and puts them on speaking terms.

The other type of initiative that is going on is

to take existing master agreements and expand the scope of those so that they can cover more products within the framework of the credit terms that's provided in those master agreements while still enabling the parties to have the benefits of whatever the industry-specific provisions are for that particular product.

The initiative that Ed mentioned in this regard is the joint effort of ISDA and EEI to develop a so-called Power Annex. What this is designed to do is to enable parties that already have an ISDA Master Agreement to widen the scope of that agreement to include physical power transactions while at the same time having those physical power transactions documented with the benefit of the provisions that EEI spent a great deal of time and effort in developing in its Master Agreement three years ago.

This effort has been underway for a couple of months, and we hope to have the results of it published by the end of the first quarter, and we're very excited about it.

A similar initiative has been undertaken with NAESB to develop an annex for physically settled gas transactions. It would be an annex to the ISDA Master Agreement. And so this is kind of the second part of the solution, which is to expand the scope of existing agreements so that more products can be traded under them in a way that is consistent with market practices.

And then finally, as Ed indicated, currently there is an initiative underway with NAESB, EEI, ISDA is participating, to reach out with WSPP and see what the commonalities are with respect to these various documents to determine what can be done to bring rationality to the

various product-specific master agreements that are in the marketplace right now.

(Slide.)

Finally, I'll conclude by saying that we're focused on has been to improve documentation standards. Of course, we can't write legislation, so to the extent that clarifications are required in the Bankruptcy Code about the ability of parties to net across different products, that would have to be done by Congress, and we encourage the FERC and the CFTC to do what they can to promote the adoption of that legislation.

And also, I'll add that what I've been talking about is really relevant in the context of bilateral trading where you've got the same entities on the side of each transaction. Often what we find in the energy markets is that there are related companies. You may have triangular transactions or rectangular transactions, and those present more complications, more challenges. And I think that's something that is an aspiration that we can hope to deal with at some point, but it's not our immediate focus.

I'll conclude by thanking you again for the opportunity to address these issues.

MR. HEDERMAN: Thank you. This would be a logical point, if there are any questions about the EEI initiatives, raise them.

CHAIRMAN WOOD: What's the unrelated consumer issue that's stopping the bankruptcy bill? Consumer issue?

MR. COMER: It has to do with whether a consumer who can go bankrupt after having been convicted of certain kinds of criminal --

CHAIRMAN WOOD: I remember this issue.

MR. COMER: It's unrelated.

CHAIRMAN WOOD: That issue stops a lot. The mechanics of the agreements, this tariff issue with WSPP, I'm just kind of making in my mind a little list of things that we may be called on to do come and help move this on. It doesn't sound like it needs a lot of help to move it along. You all have got your own incentive to get it done.

You know when we step in, sometimes it's a little clumsy and awkward, so be careful when you ask us to come in and help.

(Laughter.)

CHAIRMAN WOOD: But is there something we can do to help?

MR. COMER: We didn't ask you to help. We just noted that it is in process and we are discussing it with WSPP now. I think there are differences in their agreements. WSPP has a slightly different membership issue. They have a lot of nonjurisdictional entities which do have unique concerns with respect to credit in particular. And

we are sensitive to that.

We're hopeful they will agree to go forward, but we are not asking you to do anything right now.

CHAIRMAN WOOD: We're here to help.

MR. HEDERMAN: Thank you.

COMMISSIONER BROWN-HRUSKA: Just as a side note, this kind of reminds me of a finance class that I taught where we were talking about the development of the swaps market in financials and how they developed the master agreement and dealt with counterparty credit risk and the ways of spreading it.

There were provisions I thought in the ISDA Master Agreement that enabled a counterparty if they were defaulted on to not -- to in turn default on that counterparty in related contracts or in the same contract or in related contracts. Is that not true? And is that something we need legislation necessarily to facilitate?

MR. BUNKIN: If I can respond. I don't think it requires a legislative solution. I think the problem is this. Let's just imagine a world where you happen to have one agreement that covers your natural gas trading that, you know, it's there, and you've got another agreement that covers your financially settled trading, if there is a default on your natural gas trading, you want to say, well, that's a good indicator that there's a problem with this

person, and I'd like to be able to protect myself on my financial side.

Now unless you had the presence of mind to link those two agreements together, then you may not have the ability to do that. Now if there's a bankruptcy filing or something like that, then it's likely to be the case that that would constitute an event of default under the natural gas agreement and the ISDA agreement, so it's not going to be an issue.

But there are different things which, you know, we've seen in the marketplace where it can happen that you know there's a problem on the one hand, and for whatever reason, it's just not coordinated with the other kind of agreement that you have. And so that's the constraint. I don't think it requires a legislative solution. I think it just requires more work in the industry to bring commonality across what used to be kind of different products but all have the same risk producing --

COMMISSIONER BROWN-HRUSKA: I know that the CFTC has supported the netting provisions of the bankruptcy reform, and we've cooperated to a large extent with a number of financial regulators in formulating language for Congress in this area, so I think we're on the same page there.

MS. ST. CLAIR: Yes. I think the question now is how does it get tasked? There was some talk maybe of

stripping it out and that seemed to be a bad idea, but it always seems to get -- there's never any controversy. I don't think there's any controversy about the nonconsumer portions of the bankruptcy reform bill. It's just that one area.

But it prevents the passage of the legislation that we're all anxiously awaiting and feel is critical to implementing some of these solutions that we're eager to implement.

COMMISSIONER BROWN-HRUSKA: Thank you.

COMMISSIONER MASSEY: At some point I'd like members of the panel to comment on, it's a follow-up to Pat's question. Is there anything that this agency ought to be doing other than holding this conference to sort of send a signal that a lot of these agreements, netting and so forth, that you're talking about, are a good idea?

I mean, we've proposed Standard Market Design. It sounds to me like that's certainly a step in the right direction. But I want to know what we could do that would be helpful to the industry in resolving these problems. Is it simply a matter of private negotiations and coming up with standardized agreements that you can do privately? Or are you looking for anything from us?

MS. ST. CLAIR: I hate to beat a dead horse, but we need the legislation passed. Everybody is aware of all

these forms --

COMMISSIONER MASSEY: You're talking about the bankruptcy legislation?

MS. ST. CLAIR: Well, the part that gives the safe harbor protection to master netting agreements. And some people are willing to enter into them and have gotten comfortable that you can net, and that's up to each party individually to with their own legal counsel to decide.

But the legislation would give you 100 percent certainty that there would be no question in bankruptcy that you could feel comfortable that because you posted margin on a net aggregate basis, that you're holding enough collateral at the time that your counterparty goes bankrupt, and that you can set off a net and come to one amount owing from one party to the other under all your trading relationships instead of separate amounts and having a bankrupt owe you, you owe the bankrupt. That creates a mismatch in bankruptcy.

MR. COMER: Since you asked, resolution certainly in terms of contract certainty, resolution of a number of the Western market issues -- and I'm not taking a side on how they're resolved -- but resolution of that would certainly contribute to adding greater certainty to the market.

COMMISSIONER MASSEY: Mm-hmm.

MR. GOODMAN: Commissioner Massey, I think the single most important thing that FERC could do to help both the liquidity and the progress of a restructured market is SMD. The sooner a Standard Market Design is implemented, the far more liquid and the far more reliable our national grid will be. I was going to say that in my comments, but since you asked, I don't think there's anything more important than that.

COMMISSIONER MASSEY: I was feeling sorry for you sitting down there on the end.

(Laughter.)

MR. GOODMAN: Thank you.

MR. HEDERMAN: We're getting there. Our next speaker is Bob Stibolt, who represents the Committee of Chief Risk Officers and will talk about their initiative related to this area. Bob?

MR. STIBOLT: Chairman Wood, Commissioners, ladies and gentlemen, I appreciate the opportunity to be here today to talk about an issue that both Tractebel and I think the Committee of Chief Risk Officers -- and I've had the distinct privilege of co-chairing the Credit Working Group of that Committee, and I think we strongly endorse the need for clearing.

Just to give you a little bit of background, my title, I'm Senior Vice President, Strategy Portfolio and

Risk Management with Tractebel. I have provided some background on Tractebel for the record. We're the world's fifth largest independent power producer. We're also very active in the natural gas markets, liquefied natural gas in particular. And we're one of the founding members of the Committee of Chief Risk Officers. And I think we are very enthusiastic about the initiatives that they've put forth here.

We could actually in the interest of time and focusing in on a key issue, go ahead to the example here on the benefits of netting.

(Slide.)

And I think this is very key here. This is my Fineman diagram here showing some of the natures of the exposures in a bilateral market. And I'll just note that this example was actually based on a real live piece of the Tractebel trading operation that we pulled out and we wanted to simulate what would be the impact of clearing in the trading markets.

Now in the bilateral situation here, we've got five counterparties, and the arrows as drawn show the direction of what I've characterized as guarantee exposure, but you could really think of that is it's the credit exposure that you're imposing on the other party. So in this example, Party A owes Party D \$30 million of value, and

therefore Party D has a credit exposure to Party A.

Now if I go around the diagram, I can pick out sort of the nature of what each party owes to other parties in the trading market. In this example, I get to a total of \$172 million of aggregate credit exposure.

One of the key points to note here is in the event that Party A defaults, Party D is now exposed for \$30 million of losses. Now it turns out that Party B and Party C both owe Party A money, but that has no benefit to Party D at all.

(Slide.)

And so if you go to the next slide here, and now you talk about what if I run this through a clearing operation, what I now find is that the monies that Party B and Party C owe to A can in fact offset what's owed to Party D within the context of the clearing solution. And if you work through the numbers here in this example, you see a very dramatic reduction in risk exposure.

In this case, looking at the positive exposures of what each company owes to the market, it comes to a total of about \$21 million. So in this example, you've had an 88 percent reduction in credit exposure. And the point that, at the risk of maybe pounding the table a little bit too much, this is a very dramatic benefit as I see it for the industry. And it translates directly into the risk capital

required to support trading, which in turn will help to enhance liquidity.

John Davidson this morning talked about this 95 percent estimate of what the reduction in exposure might be with more counterparties. I think that's a very believable number. And I just want to be sure that, you know, he commented on it in passing that we don't gloss over it, that we really do recognize that it's a significant benefit.

(Slide.)

I think if we go to the last slide here -- this isn't the last slide. This is a simulation look at that same portfolio to see how could it behave under different market conditions.

(Slide.)

And then if we go to the next slide, we can actually get a probability distribution for the five parties that shows that we get at least a 75 percent reduction even in the most unfavorable outcomes in the market, and it could be substantially higher.

The performance should improve as we go to more parties participating in the pool.

Last slide.

(Slide.)

And this really is the last slide. The role of the regulator. I thought I would just try to address some

of the -- not every question that was asked, but maybe a few of the key questions, you know, what can the regulator do to help here.

I think there's been a lot of discussion today about capital adequacy. I think capital adequacy is a really critical issue. You are concentrating credit risk within the clearinghouse. If I could quote from Mark Twain. One of his quotes was put all your eggs in one basket and then watch that basket. To the extent that we're concentrating credit risk in the clearinghouse, we really have to watch that basket. We have to be absolutely assured that it does have adequate capital to meet all its obligations.

And I think this comes to the issue of transparency as well, to make sure that it's very transparent that it's got capital adequacy and also very clear disclosure of what are the protections that you're getting from the clearinghouse as a direct member versus what you're getting as a customer of a clearing member where in fact you're not protected directly by the clearinghouse.

So it's fine to do indirect clearing, but you have to recognize that you are now getting a credit concentration with a party that is not the clearinghouse. And I think that is an issue to be addressed.

I think some of the other attributes here was to

assure the broadest possible participation, what we called broad access. Again, to the extent that you can open this up to a wide variety of parties, they can get the benefits of clearing that will increase liquidity. I think it will enhance competitiveness as well.

And I'll just quickly note that -- well, we did in fact have a clearing solution in the industry a few years ago. It was called Enron Online. It wasn't a very good solution, in my opinion. You did have one counterparty that was the buyer or the seller, and you did have the concentration of credit risk there.

I think if you go through the clearinghouse mechanism, you can get the broader participation of multiple parties that are trading in the market.

And then I think the issue for the industry is just to be assured that there is a reasonable pricing to this service as well. I think in the traditional clearinghouses, it's always been the clearing members clearing with each other, so there was a natural enforcement to keep the costs appropriate.

But as you talk about opening this up to a broader market, I think there are participants in the energy market that are just very concerned that as they transition to a clearing solution, perhaps they're going to get gouged on fees. And I think that has been something of a barrier

here.

I think it's an issue the industry needs to work to. That's the extent of my remarks, and I thank you.

MR. HEDERMAN: Thank you. Our next speaker is Vince Kaminski, one of the leading thinkers in the area of developing tools for dealing with risk and the leader of the recent University of Houston Conference, as several speakers here have mentioned and participated in. Vince, can we have your comments?

MR. KAMINSKI: Thank you. Chairman Wood, Commissioners, I would like to thank you for the opportunity to participate in the discussion of the issue that's of critical importance to the energy industry and you know, so far, you know, it was a great conference. I learned a lot from all the presentations.

Before I go forward, you know, I want to say that, you know, probably it will come as a relief to Andrew Lamb that he is not the only speaker with a funny accent.

(Laughter.)

MR. KAMINSKI: And like Andrew, I didn't work for the CME but I did the next best thing. I got a job in Chicago. I worked for a hedge fund in Chicago, one of the many financial entities that either have entered or are contemplating entering the energy trading field, and I expect that in the future, the financial firms like hedge funds or investment banks, will become a very important

source of liquidity to the energy industry.

And as I have said, in my view this is the number one issue for the energy industry. It's very actively debated at practically every industry forum. And to understand why it's so important to the energy industry, first we have to step back and take a look at the current system of managing credit risk exposures at the energy companies.

And as it was mentioned many times at this conference, the system we have is based on a bilateral agreement and the process of negotiating those agreements is extremely time consuming and cumbersome. It consumes significant resources both in terms of time and talent, and financial resources. And also it takes a very long time and we end up with multiple agreements, credit agreements which are sometimes two legs of the same transactions may be under separate credit provisions.

Also we have a system which is based on collateralization of exposures when credit exposures exceed certain thresholds and the problem is that in many cases the calculation of current credit exposure is very difficult due to limited price discovery and also to adversarial relationships between different counterparties.

And it's not unusual in this industry to have two counterparties asking for collateral at the same time for

the same transaction, and of course both counterparties can be wrong but they cannot be right at the same time.

There is another, even more serious problem than the cost of negotiating credit agreements. In my view, the system of managing credit risk based on bilateral transactions, bilateral contracts, in some cases may result in financial instability.

And I can show you an example that the underlying reason for that is that the way the credit agreements are administered and practiced is less than satisfactory. What we can see in many cases in the energy industry is asymmetric execution of the collateralization provisions.

(Slide.)

And what you see on the screen is an example of a transaction with practically no market risk. Suppose that I buy forward 10,000 Mmbtus of natural gas at the one location. I sell 10,000 Mmbtus of natural gas for the same maturity, the same location, I lock in the spread, and let's suppose, for the sake of argument, that both counterparties are of the same high credit quality. So effectively I eliminated a market risk and credit risk.

But given that is a collection of collateral maybe asymmetric and it happens quite often in practice is this credit arrangement, this system of managing credit risk may result in significant cash flow problems for my trading

corporation. So suppose I executed the transaction at three dollars per Mmbtu, now the price increases to four dollars per Mmbtu. The supplier has incentives to walk away from the contract but he cannot post collateral for a number of reasons. This may be a producer who has insufficient cash flows. It may be a municipal utility that cannot post collateral under its charter. There may be different reasons why this may happen but on the other side, on the other side of this transaction, the buyer requires collateral. If it's a financial organization that insists on collecting collateral and there's a negotiated credit agreements, we may face my trading organization may face significant cash exposures, cash flow difficulties.

Now let's take it one step further and let's consider the case of run on the bank scenario. It's not really a hypothetical scenario, it's a stylized representation of what actually happened. So suppose that we have a trading entity that is credit impaired and everybody who is posting collateral with this entity will insist on using letters of credit, or will try to avoid posting collateral.

On the other side, the collateral provisions will be strictly enforced. If there is no system in place to monitor the letters of credit posted on one side, we may have very serious problems related to the cash flow and the

credit difficulties, credit impairment of this trading operation may become much worse.

So what is the solution? You know, it's quite obvious to me the transition to multilateral netting is the best way to go. This is the solution to the current credit gridlock that we observe in the energy industry. At the same time, I realize that it will be a very painful and slow transition for a number of reasons.

And I want to give you a number of reasons I have discovered this through many conversations with different players in the energy industry. I agree with some points they made, I may disagree with other points but you know it's very important that the energy industry tends to be quite skeptical. And it's well known in the history of finance that many financial innovations that had minor design flaws never really came to fruition. In some cases, you know, it just takes a minor error in the design, a mismatch between the risks addressed in a financial innovation, and the risks faced by the potential users, and the financial innovation is rejected by the marketplace.

If one looks at NYMX electricity contract, one can see the best example of what has happened. We were talking about the contracts hedging risks over a period of one month, whereas the risk then in the power market is concentrated typically in one day, sometimes in a few hours

of a given day.

So what are the reasons why the transition to multilateral netting may be slow and painful. One reason is that the transition requires a significant effort at the level of every energy company. It takes new IT solutions, it takes redesigning the business processes at the level of every energy company, and this is time-consuming, and it also has to happen when the industry is under considerable stress and faces cash flow difficulties.

You know, the second problem is related to the interaction between physical and financial transactions. And I think that the fact that many energy contracts at some point we will have to go to delivery, represents a real challenge to a multilateral. Why does it happen?

We have to recognize that we have in this market players who have to use economic jargon, different utility functions. To a financial company, a solution based on liquidated damages is perfect; it doesn't create any problems. But in the case of a load serving entity, and in the case of a natural gas distribution company, the overriding objective is the fact that lights are on and natural gas flows to the end user. And in some cases paying a higher price is of minor importance because we are talking about a marginal transaction which can be spread over a large volume of electricity or natural gas delivered to the

end users, and it may be just a rounding error, I believe, for the utility.

But the fact that the physical flow takes place is of overriding importance, and it's got a critical issue to people who have responsibility for the administration of the energy-related contracts because their jobs depend not so much on the financial transactions on the financial results that can be passed through to the end user, but on the maintenance of service.

So the problem is that when a physical transaction mutates into a financial transaction becomes an economic equivalent of a futures contract, and then mutates again into a physical transaction, counterparty A may not necessarily end up with the original counterparty, let's say counterparty B. And there are good reasons why counterparty A has chosen counterparty B. It may be the case that counterparty B has experience in certain types of contracts, it may be the case that the counterparty B has access to the physical infrastructure; storage, transmission lines, generation units that facilitate the execution of the physical flows.

Another problem, and this is quite, quite serious is in the lack of standardization of energy contracts. I agree with the previous speakers that we can observe the trend towards standardization of certain contracts but at

the same time one has to recognize that many energy-related transactions are often unique and this represents the practical requirements of transacting business in the system that is characterized by a fragmented infrastructure and is characterized by overlapping jurisdictions with many conflicting laws.

So this is why one has to negotiate contracts which have many unique features and when it comes to netting, it's very difficult to accomplish it, given the complexities of many transactions.

There is another aspect of standardization of energy contracts and its valuation. The lack of standardization results from the fact that many energy contracts are very difficult to value and they depend not only on the observed market prices but they depend also on many variables which are not directly observable; correlations, volatilities, and so on. And this is why it's very important to develop the industry sources for reliable price indices and also for additional variables that are critical inputs in the valuation of energy-related contracts.

And this is why I am very excited by the initiative that is currently under discussion at the University of Houston. The initiative to consider providing the service to the industry, the service of compiling price

indices and also the service of providing other inputs like correlation coefficients and volatilities for the forward prices.

Another point I would like to make -- and this is not the point I necessarily agree with, but this was mentioned to me by a number of players from different corporations. And this may be a point that explains why some companies are not rushing to become parties to multilateral netting.

The problem is that many energy companies with reasonable credit are now managing credit risk by flying under the credit threshold. So this means that they structure their business in such a way that they don't have to post collateral because they transact with different counterparties below the negotiated credit limits.

If they go through the system based on multilateral netting, they will have to post collateral, starting at ground zero, so that's one problem.

The second problem, and this follows a remark made by Bob, the problem is that we may observe, see very high margins required by the clearing members, and this is not -- this is not the rationale. It doesn't necessarily represent gouging.

We are dealing with the industry, with the markets that are characterized by very high price volatility, and high price volatility will translate into high margin requirements.

A few other comments: I fully agree with Bob

that there is a risk of concentrating risks in a few entities, and I think that if multilateral netting happens, the regulators have to watch the clearinghouses very carefully, because we are dealing with, again, with the markets that are characterized by very high-price price volatility.

And I remember the events like the Metalgesellschaft crisis of '94, and if I remember correctly, one player had to post -- had to respond to a margin call of \$700 million in a day. Fortunately, this player had a backing of a strong and very responsible parent.

I also remember the events of June 1998 when the power prices spiked for a few hours to extremely high levels, and the volatility based on those prices reached 20,000 percent. And typically in the financial markets, volatility of 20 or 30 percent is considered to be quite, quite high.

Another issue I wanted to mention is that multilateral netting may increase reporting and regulatory compliance burden to many companies. Why would that happen?

Well, we may start with a financial transaction, a power transaction that has to be reported to FERC; it's under FERC's jurisdiction. Then this transaction mutates into a financial contract, into a futures contract that

falls under CFTC jurisdiction, and then it may go back to becoming again a physical transaction that falls under FERC jurisdiction, at which point this transaction has to be reported to a regulatory body is a question that has to be addressed. Yes, thank you very much for your time.

MR. HEDERMAN: Thank you. Our last speaker is Mr. Goodman who can tell us some stories from the front lines of the energy marketers world. Please go ahead.

MR. GOODMAN: Thank you, Bill. Commissioners, thank you for keeping the building open this late.

(Laughter.)

MR. GOODMAN: We appreciate. I'm going to try to

--

MR. HEDERMAN: I think we have dinner ready at the Santa Fe Cafe.

MR. GOODMAN: Excellent, excellent. I'm going to try not to repeat. It's going to be very hard, but I'm going to try not to repeat anything you've already heard. The panelists were excellent; the conference was a good idea, an excellent idea. It's been incredibly informative.

As you know, this industry historically has not dealt with these issues, so having this forum, a joint forum with CFTC was an excellent idea. We appreciate it; I know the industry appreciates it. Thank you.

I want to introduce myself, and then I'm going to

do you the courtesy of skipping as quickly as I can to the last or next to the last slide, so that we can get to questions and hopefully go home tonight.

My name is Craig Goodman. I am President of the National Energy Marketers Association. This Association is a nonprofit. It represents both wholesale and retail marketers of energy, telecom, financial-related products, services, and information technologies, both throughout the United States, Canada, and the UK.

Our membership includes wholesale and retail suppliers of electricity, natural gas, IPPs, suppliers of distributed generation, energy brokers -- that's voice brokers -- power traders, electronic trading exchanges, advanced metering and load management firms, billing, information technology providers, credit and risk management companies, financial service firms, software developers, clean coal technology firms, and we also have telecom, broadband, and energy-related Internet companies in our group.

So it's a very regionally diverse, broad-based coalition of energy and financial services and technology firms. We have come together to try to forge a consensus and to help resolve as many issues as possible that would delay competition.

Having heard all of the information that you have

today, what I'm going to try to do is skip to or put it into some kind of context. Historically, as you know, this is not energy regulation. This is brand new to the energy business.

I'd like to give some context so that we can pull all of these strands together at the end of the day. The Enron bankruptcy created an unprecedented crisis in the nation's wholesale electricity markets, and underscored the need for new standards, guidelines, standard market design, that will eventually provide this country with a stable, reliable electricity market.

FERC is moving quickly to fully integrate the nation's electricity grid and to establish uniform rules, uniform trading hubs and operating processes. However, as you know, time is of the essence.

We need to reverse these credit and liquidity crises that have shaken our markets. NEM and our members are proactively trying to move towards solutions like you've heard here today, that provide the industry with some kind of help while FERC is working on the SMD program.

Historically, the wholesale trading and delivery of gas has occurred through a robust, often volatile series of bilateral transactions, as you have heard all day today.

And while there are formal regulated exchanges that trade futures in both electricity and natural gas, our

historical lack of an organized uniform standard of contract, contract terms, liquid delivery points, plus the evolving nature of the restructured wholesale and retail markets has basically engendered what is now known as the over-the-counter market for these commodities.

Trading in these commodities is accomplished primarily by energy brokerage firms, specializing in matching buyers and sellers, and more recently and importantly, by electronic trading exchanges that match buyers and sellers through the implementation of fairly new and sophisticated technologies.

Until the creation of the EEI/NEM standard wholesale power agreement, which I would like to encourage you to think of in a very, very positive manner, and more recently, as Carol noted, the master netting agreement, which is a major advance -- I mean, when Enron went down, you know what happened. We were beset with bankruptcy problems that rippled throughout the entire industry.

This master netting agreement, as you know, is only a bilateral tool, and it's still on the edge, the legal edge, the cutting legal edge of bankruptcy issues. What Ed and Carol told was that in reforming the bankruptcy laws, you really don't even get to a full netting, cross-commodity netting, unless a cross-entity netting or a multilateral netting, which is why these clearing solutions that you have

explored today are so important. They do get you that legal, multilateral netting capability that you don't have in a bilateral marketplace.

And that's one of the problems we've had for a long time. At the time of the Enron collapse -- this is another important point that Vince brought up for the first time today -- at the time of the Enron collapse, there was very little common and verifiable ground for the vital elements of price structure in the U.S. power markets.

Structured and standardized settlement terms, pricing, reliable indices, universal, transparent, credible, and auditable mark-to-market procedures just did not exist when Enron went down.

At that time, there were numerous survey publications, but they were often simply individuals calling industry contacts to query for transactional prices, volumes, and terms. It was not possible when Enron went down to really verify price, volume, or term for many of these reported transactions.

There was no industry standard for state and regional indices; there was no common daily or monthly settlement procedures, and this means that the market participants have had to rely on very nonscientific, non-verifiable settlements and indices that served to determine the financial result of billions and billions of dollars of

transactional value.

And you add to that the fact that there were very few liquid trading hubs -- there still are a very few liquid trading hubs -- in which the physical delivery of both gas and electricity, for that matter, can occur, consequently, the industry has necessarily had to rely on the informal, bilateral and multilateral OTC trading, brokerage, and electronic matching of buyers and sellers.

We, our organization, believes very strongly that the creation of a new and innovative energy-related trading, risk management, clearing, netting, and settlement industry, as well as the creation of reliable price indices, are critically important to the development and the movement toward a fully integrated, economically rational and efficient North American energy market.

Lee or Bill, if you could skip over to Slide 4, which is my next to the last slide?

(Slide.)

MR. GOODMAN: I want to save everybody some time and energy here.

Our members have been very active in a number of things, and I'm just going to -- at the end of my presentation, I'm going to click off just all of the different standards that we need uniformity or near-uniformity in, or as close to uniformity as we can get in

order to get this market in a rational, liquid, transparent format.

We published here today, and I hope you will put it in your records of proceedings, a document called "Solutions to Improve the Liquidity and Creditworthiness of the U.S. Energy Industry." It provides an explanation and a comparison of the various clearing, netting, and settlement options that we discuss and that you discussed throughout today.

The document also discusses the costs and benefits of these solutions, and we might suggest that the benefits have been mentioned all day long. They don't -- the do bear repeating, but I won't, for purposes of brevity, but I will say that the reduction in risk by netting, multilateral netting, and the mutualization of insolvency risk is an incredible reduction in the cost of capital for our industry and the amount of capital that you need to either trade or hedge either production or consumption. It's an enormous benefit.

And we believe that clearing solutions do have -- they are part of the solution. Ed gave you part of the solution, which was the master power contract. It's vital. We had no uniformity in product definitions until that time.

All of the terms and conditions in that contract

were literally hundreds of variables in an energy trade. And Carol just went through and told you about the master netting agreement. That was a major part of the solution.

Clearing is another major part of the solutions. Uniform business rules and business practices are another part of the solution.

Standardized wholesale and retail market design - - if there is nothing else that FERC can do but implement a standard market design, you will have taken this industry forward, I would say centuries, but I'll say decades, to be generous.

And then we also need standard price indices. It is the key to price reliability; it is the key to FASB compliance. It is also the key to credibility with both investors and regulators.

I think you can move to Slide 5 now, which is my last slide, and I'm going to try and wrap this thing up.

(Slide.)

MR. GOODMAN: As you probably all know, we are committed to opening markets for competitively-priced energy and related products and services. We believe that a truly liquid, competitively-neutral wholesale market is vital to all of this.

All of the clearing, netting, and risk management expertise of our members, together with uniform business

practices, will help restore the confidence and creditworthiness and reduce the cost of capital in our industry.

As I mentioned, the real key is the development of liquid, competitively-neutral standardized wholesale power markets. We strongly support FERC's efforts in this regard, and we reiterate the comments that we filed with you. I am not going to repeat them here today, but they are the key to a liquid -- they are the cornerstone for liquidity in buying, selling, and delivering power, the three things that we need to commoditize to make this market work.

Other suggestions I would put into your thought process and something that you're not aware of, perhaps not aware of: Currently, the following alphabet soup touches our industry: We have the EIA, the FERC, the DOE, the CFTC, the FTC, the FCC, the SEC, FAESB, and probably the oncoming of Homeland Security as well.

They all touch a newly restructured energy market. We would urge that the agencies work together, and eliminate any duplicate reporting that you can. There is so much reporting going on out there that if there is any way to centralize, any way to standardize, any way to take out the conflicts, we urge you to do so.

We would obviously support standardized,

credible, transparent price indices. They have to be created, they have to be used, and our members literally have the technology to implement them today.

Our members are working on developing that as we speak. It is a very important component of the answer here.

Obviously you all know about the standardization of business rules, practices, and operating procedures, as well as tariff structures. What may not be so obvious is that the standardized electronic data protocols are vital. We have said this for several years.

Some of our members have developed standardized XML protocols and have recently given them, free, to ISDA. We would ask you to take a look at that, and we would ask ISDA to take a look at that.

And, lastly, if these standard rules come forward, practices and procedures, we would ask FERC to require that these rules and practices be implemented on a uniform, cost-effective, and expedited basis. I would say to you that the prior theory of letting 50 flowers bloom and pick the best one has not been a good idea.

And, with that, I will thank you again for letting me come here today, and I stand ready to answer any questions.

COMMISSIONER BROWNELL: Craig, when is the industry coming forward with their proposal on the indices,

and why don't you give us a little advance picture of what that might look like? And if anybody else wants to comment on that, there has, of course, been some suggestion that this would be a wonderful thing for government to undertake. I'm not one of the fans of that solution, but I do not think we can wait a whole lot longer.

MR. GOODMAN: I don't know whether "undertake" is the right word, but certainly endorse, certainly encourage, certainly perhaps even somehow give it the imprimatur that it's legitimate.

My understanding is that several of our members, in fact, a number of our members have both the technology and the data inhouse today to go back to at least 1994 on certain gas and electricity transactions. We have a number of voice brokers and the electronic trading exchanges and virtually all of the clearinghouses as members.

The data that reposes in each of these members, they are currently working out between them, how to integrate all of their separate databases so that they can have at the end of the day, one integrated database or two or three that are reliable, that are based on real transactions, that are not survey numbers, and they are something that you can mark your book with.

MR. KAMINSKI: If I may take a minute of your time, I would agree that the issue of price discovery is of

critical importance to the energy market. It's very difficult to envision an efficient energy market without risk management tools, without a system of financial derivatives.

And this market will not develop unless we have reliable price benchmarks, against which swaps or options can settle. So this is really critical to rebuild public confidence in the published energy indices, and unless this happens, it will be very difficult to resolve the problem of netting as well.

As John mentioned during the first session, you cannot net if you cannot value the contracts correctly, and the valuation depends critically on having reliable price information.

MR. STIBOLT: I might just comment quickly here that I know the Committee of Chief Risk Officers has a working group on this subject as well, and it has gotten some feedback from a number of interested parties, including, I think, both the FERC and the CFTC.

I think the challenge for the companies participating in that effort is that we need something that really does have some teeth to it, not just some warmed over recommendation. So I'm very confident that we will get to something.

But I think you will have to have transparency in terms of where the numbers came from, and I think some of the discussions I've personally been involved in is if you're putting an index together, don't just go ask the sellers what the price is. You have to ask the sellers and the buyers what the price is, and you can get a more robust statistical measure.

So I think there's an issue of breadth of sampling as well as being sure you're sampling across the spectrum of buyers and sellers and you have a natural sort of enforceability of truth that comes out of that, if you will.

COMMISSIONER MASSEY: Well, once there's an RTO in every region of the country with operating day-ahead and real-time market for electricity and various electricity products, won't that provide fairly good price discovery on a region-by-region basis? Are you suggesting something, at least with respect to electricity, in addition to that?

MR. GOODMAN: I think you hit it on the head. I mean, it's precisely what we need to have liquid trading hubs like the Henry Hub in gas. We need that everywhere for electricity as well.

When that happens, you will probably find that electricity contracts will become futures contracts instead of OTC contracts because the uniformity will be there. And

you'll be able to have liquid tradeable commodities.

Right now, with the absence of that kind of liquidity in the marketplace, those kind of liquid trading hubs, you're relying primarily on, if I'm not mistaken, PJM West is probably the most liquid trading hub we have for electricity. And if you need to take physical delivery of either an OTC product or a replicant product, which is being traded on an exchange, typically the delivery will be at that liquid trading hub.

COMMISSIONER MASSEY: Robert, did you have something else in mind? Is your committee working on something else?

MR. SIBOLT: Well, I think you raised the issue of daily settlements. But I mean there are markets like forward, full month settlements in natural gas where you wouldn't have an obvious set of data coming at you from the RTO or even from the daily markets.

So I think we do need to be able to address those monthly settlements as well. I think it's very doable, you know. It's just a question of a commitment to get the breadth of data and put some controls on the reporting process as well so that it's coming through perhaps a middle office function where there isn't -- there's more of a control on what's being reported as information.

COMMISSIONER BROWNELL: I would just like to say,

and I know that we've all talked about this a lot, if there is something that we need to do to give teeth to whatever effort, to make sure that there is full reporting, you need to let us know and let the CFTC know.

Because this is I think a far more critical issue that needs more attention, and we need to get on with it quickly. I think Dr. Kaminski certainly made that point very clear.

COMMISSIONER MASSEY: As we push forward to standardize markets, do you believe that these other functions will necessarily follow? For example, the clearing function. Does the Commission need to say something about clearing, or will it just come naturally as the markets become more mature? What's your opinion about that.

MR. GOODMAN: Commissioner, I think the clearing industry has developed because there has been this vacuum, and that while you're developing the SMD, the clearing is this natural bridge to your SMD process. It fills that need for liquidity as you're going forward with SMD.

And to your other question that I didn't answer fully, RTOs may not necessarily generate long forward price curves. They'll have day ahead and real time price curves. But your longer-term markets are definitely also in need of accurate marks.

COMMISSIONER MASSEY: I see what you mean.

MR. KAMINSKI: To follow up on this point very briefly, I agree that forward prices are extremely important, but the natural progression in every market is that we have to start first with the spot prices, and once the liquid market, spot market develops, the forward contract and futures contract will follow.

What we were trying to do a few years ago in the case of electricity market, we were trying to reverse this process and start with a futures contract without the underlying spot market, spot prices to which the futures prices might converge.

So I think that the Standard Market Design, the development of RTOs is of critical importance to this industry. I don't think that there is anything more important than having the Standard Market Design for the electricity markets.

COMMISSIONER MASSEY: That's the right answer.

(Laughter.)

COMMISSIONER BROWNELL: We hope you say that a lot to a lot of people.

MR. BUNKIN: I wonder if I could make a quick observation, which is that -- and this may kind of contradict the spirit of what I described before. But it's interesting to look at the Enron situation, because the

actual bankruptcy event itself didn't really -- was absorbed readily in the market, and the losses, the credit losses that Enron counterparties experienced on their energy trading really didn't have a substantial impact.

Now there were banks that had loans and so on that took large write-offs, but the actual Enron event itself didn't create the problem. What that precipitated was rating agencies and other people reevaluating the merchant energy sector and asking questions about whether those companies were adequately capitalized for the risks that they were taking.

But it's interesting to note that, notwithstanding all the problems and aggravation that people had about, well, I can't net this against that and so on, the actual default itself didn't have a large damaging impact on the market.

And I think what that suggests is that people were able to manage their risk and are focused on dealing with addressing counterparty risk. It just so happens that we've experienced this subsequent fallout because of a kind of philosophical change in thinking that's taken place as a result of this.

MR. HEDERMAN: Okay. As we go to finish, I'd like to acknowledge a lot of hard work from Lee Choo's staff, Anita Herrerra and Karen Mucha as well as Saida

Shaalán. They all put a lot of effort into this. Jane, I don't know if you want to mention your folks.

MS. THORPE: Yes. I'd like to thank a lot of people who helped organize this on behalf of the CFTC in particularly Ananda Radhakrishnan and Ann Marie Kelly, who is sitting back there, John Laughton, who is sitting back there as well. So many thanks.

CHAIRMAN WOOD: It's been a delight. Sharon, thank you and thank your colleagues. I'm glad we're all here. We'll do it again. If it's your shop, we'll bring our flag over.

(Laughter.)

CHAIRMAN WOOD: I thought that was great. I got an e-mail last night, they're bringing their flag. I went, rock on.

Y'all been a great panel.

COMMISSIONER BROWN-HRUSKA: We weren't staking out territory or anything.

CHAIRMAN WOOD: We appreciate the seriousness of the issue, and I can't tell you how impressed I was with the quality of every one of these panels. You folks that put it together, you get an A in conference planning, and if you're looking for a second life, I know where you need to go.

This was helpful. It's not the last. It's the beginning of an education for us. I do sense, as I think I

heard both my colleagues echo here, some urgency, and so please know that this issue is on our front burner until the cake is cooked, and we want to cook it and enjoy the flavor of it so that the customers of this country get what they're bargaining for in the area of good energy markets.

Thank you all for your expertise and good senses of humor and intelligence. We appreciate it. And you're always welcome back here. Thank you all. And our meeting is adjourned.

(Whereupon, at 5:40 p.m. on Wednesday, February 5, 2003, the Joint FERC/CFTC Technical Conference adjourned.)