COMMODITY FUTURES TRADING COMMISSION

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TECHNOLOGY ROUNDTABLE

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Tuesday, December 7, 1999

1:04 p.m.

Commodity Futures Trading Commission

Room 1000

1155 - 21st Street, N.W.

Washington, D.C.

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P R O C E E D I N G S

CHAIRMAN RAINER: I'd like to welcome everybody to our Technology Roundtable today. We're all very excited about today. In context, the Commission is having three public meetings in our process to review our mission. The first one was held this past Thursday, at a general roundtable to discuss regulatory matters. It was a very enlightening and healthy discussion. Today, we have the Technology Roundtable, and tomorrow we have an Agriculture Advisory Committee meeting, chaired by Commissioner Spears.

For those of you who are interested, I'm told that the transcript of the meeting of last Thursday will be on our Web site about December 21st, for anyone who wants to review that transcript.

I'd like to introduce my fellow Commissioners at this time, starting with Commissioner Holum on my immediate left; Commissioner Spears on my far right; Commissioner Newsome, who is the Vice Chairman of this Roundtable, and I'll take a moment and thank him

and his staff publicly for organizing this event, they did a great job; and Commissioner Erickson on my far left.

I'd like to take one moment to introduce two people. One is a former Chairman, Phil Johnson, who is with us today--there he is--and former Commissioner Joe Dial, down at that end. We are privileged that you two could be with us today. Thank you.

I thought that what we would do--it worked out pretty well the last time--is to start on my left and just tell us who you are and what company you're with, and we'll just go around so that everyone can introduce himself or herself.

David?

MR. DOWNEY: David Downey, Interactive Brokers, from Chicago.

MR. CONCANNON: Chris Concannon, Island, ECN.

MR. KANE: Mike Kane, California Power Exchange.

MR. KEMP: Gary Kemp, Trading,

Technologies.

MR. KIMBALL: Paul Kimball, Morgan Stanley.

MR. PANTANO: Paul Pantano, McDermott, Will and Emery, Washington, D.C.

MR. STEINMETZ: Joel Steimetz, Instinet.

MR. MAY: Ray May, DNI Holdings.

MR. COX: David Cox, Lind-Waldock.

MS. DOWNS: Yvonne Downs, Chicago Board of Trade.

MR. DUGAN: Dave Dugan, Chicago Mercantile Exchange.

MR. LEE: Peter Lee, Merrill Lynch.

MR. SPENCE: Steve Spence, Merrill Lynch.

MR. LEITNER: Tony Leitner, Goldman Sachs.

MR. HINKLE: Hal Hinkle, BrokerTec.

MR. GAINE: John Gaine, Managed Funds Association.

MR. HAASE: Ken Haase, National Futures Association.

MR. TODD: Phil Todd, E-Pit.

MR. SCHAEFER: Mike Schaefer, Salomon

Smith Barney.

MR. BORISH: Peter Borish, Computer Trading Corporation.

MR. DIAL: Joe Dial, E-Markets.

MR. PAULSON: Brett Paulson, Board of Trade Clearing Corporation.

MR. HEINZ: Jim Heinz, Marquette Partners.

MR. MOLLNER: Larry Mollner, Mariah Trading.

MR. RAISLER: Ken Raisler, Sullivan and Cromwell.

MR. CUNNINGHAM: Cravath, Swaine and Moore.

MR. ROSEN: Ed Rosen, Cleary Gottlieb.

MS. CARLIN: Jane Carlin, Morgan Stanley.

MR. JOHNSON: Phil Johnson, Skadden, Arps, Slate, Meagher and Flom.

CHAIRMAN RAINER: Okay. As you can see, we've assembled an excellent group of people, and let me just take a quick moment to tell you how appreciative we are for you to being here, and taking the time to share your wisdom with us. We will be listening very carefully to your comments.

With that, let me turn the program over to Commissioner Newsome.

COMMISSIONER NEWSOME: Thank you, Mr. Chairman. Last week's roundtable, in which many of you were here, some of you participated in, I think certainly laid an ideal foundation for today's discussion. I would like to thank each of you for your participation, many of you on short notice, as we attempt to try and move the CFTC into the new millennium.

Certainly, the industry is changing rapidly, and many of these changes are driven by advances in technology. This has led to changes in competition, changes in the real risk of manipulation, and changes in regulatory needs.

As most of you know, we are using this roundtable as a means to lay the ground work and set the direction for a technology advisory committee, which will be the newest advisory committee of the Commission. I'm certainly excited about this committee and the information that it can provide to the Commission.

For the benefit of the audience, I'd like to go over how we plan to handle today's meeting. We have four agenda items to cover today. First will be a discussion of trading technologies currently in use; second, the effects of these technologies; third, a look at what future technologies may be on the way; and then, fourth, a review of what regulatory responses might be appropriate. We'll take about 45 minutes for each agenda topic.

Since we have a rather large group, we have subdivided the group into four subsections. And we previously spoke

with all of the group members to find out which subgroup they felt most comfortable in and we've tried to make those accommodations.

And then also we have four discussion leaders. David Downey will lead the overview of the first section, Tony Leitner will take us through the second session, Hal Hinkle will guide the discussion in the third section, and Phil Johnson will end with the fourth section. I'd like to thank those four gentlemen for allowing themselves to be exposed as discussion leaders. I think it'll be fun.

Let me emphasize, that even though we've been broken down into the four groups, every participant will have the opportunity to comment on or question any of the four topic areas. I've asked the group leaders, with about five minutes left in their time period, to open it up for any other comments or questions that anyone might have. We're going to try and take about a 15-minute break at 2:45.

For the benefit of the court reporter, we've got two different kinds of microphones here today. I think there's a few of these that just have the normal switch on and off. The others have the button and the red light comes on when the microphone is one. Please utilize that microphone, state your name just before you start just so the court reporter will know who is making the comments, and then please turn it off when you finish. We've got this system where if more than two or three of the microphones get turned on at one time, none of them work, so if you can, think to turn it off.

Again, I appreciate everyone taking time away from your business to be here. We do know that you give up resources in order to do so, but your advice to the Commission is very important and appreciated.

At this time, David, we'll turn it over to you to start your group discussion.

[AT THIS POINT, THERE WAS A TECHNICAL FAILURE IN THE SOUND RECORDING SYSTEM. THE INTERRUPTION WAS APPROXIMATELY 8 MINUTES IN DURATION AND NO OFFICIAL RECORD WAS TAKEN DURING THIS TIME. INITIAL PRESENTATIONS BY DAVID COX AND GARY KEMP WERE NOT RECORDED.]

MR. DOWNEY: Raymond May, of all of the groups, I'm less familiar with what your business does, but I can only guess that it's to facilitate negotiations. Is it something that, again, you recognize something in the business world

that can be done cheaper, better, faster, or did someone come looking for you to develop the technology?

MR. MAY: Good morning. Thanks, David. Let me try and explain for the audience who we are. I'm the CEO and CTO of DNI Holdings. We've developed the Blackbird system. We're located in Charlotte, North Carolina. It's an exciting business, a friendly, relatively inexpensive location.

To give my personal history and the markets that we're going after, the global OTC derivatives markets which are predominately centered in London, you might expect me to try and move my business and be surprised that we're in North Carolina. But it's the last thing we would do is to move it, and we are very excited to be in the United States.

And the answer is pretty clear. The innovation that's in this society and the closeness to the technology centers--we've done 50 percent of our technology work in Palo Alto, California--leads us to want to be centered here. The spirit of electronic trading is changing the dynamics, and the need for us to be in London or in New York is not there anymore.

If you've heard of the Blackbird system, it is a computer system designed to allow major dealers to negotiate bilateral contracts or instruments in the swap community, very non-standardized, very different to the exchange markets, providing highly individualized credit-sensitive and screening mechanisms to occur. We assume about 50 to 100 dealers in the world.

Coming back to your question of was this led or was this--are we leading or were we pushed, you know, there are plenty of people that are trying to build consortiums. We started out in '96; I think we saw this opportunity before other people did. We've spent three years developing this. So, no, we are leading, but the reason is faster, better, anonymity.

I and my colleagues, a lot of us, we spent years on trading floors and it was clear that there was a better way than the current voice broker market, very different. You know, it's opaque, so we were looking for better ways to do what we did and so we went out to try and design that, and the technology enabled it.

MR. DOWNEY: Paul Kimball, I don't know you. I know who you're with. There are some providers here of order routing systems, execution systems. You obviously have a big network of customers, fairly remote, dislocated. Are you looking to build the technology, buy the technology? You must be aware

of what is going on. How is the efficiency attracting a firm the size of Morgan Stanley Dean Witter?

MR. KIMBALL: Well, let me speak about the over-the-counter foreign exchange market because I'm really not competent to speak much beyond that, and there are a couple of interesting developments in our world.

The technology that has entered the market has bifurcated itself. The dealer-to-dealer community that does thousands and thousands of trades a day in order to create a market and a liquidity function so that customers can have good prices to deal off of--that technology has really centered around common platforms, not only to do dealing bank to bank, but to clear, settle and make the payments efficient in the back office.

Now, it has been very different dealer to client. The dealer-to-client world is still a neanderthal sort of place, in that a lot of the confirmation systems are manual. They are bilateral, they are not multilateral. And as a result, there is a lot of inefficiency in the over-the-counter foreign exchange market when dealers deal with customers because what has happened at least in the past is that individual banks or dealers will try to create bilateral messaging systems, settlement systems between themselves and their clients.

But as clients have become more active in the markets, they are finding that they are now starting to search and grope for multilateral platforms that they can use across many dealers, where the messaging systems have a common language and it is the exact same format.

So we're going to see a revolution in foreign exchange over the next couple years as technology providers sitting around this table, them and perhaps others, will try to create some common protocols for the back office and try to extend the common front office pricing modules that exist for the dealer-to-dealer community down to the dealer-to-client community.

And let me just try to paint for you a picture of what I'm talking about. Right now, there is this company, EBS, which is owned by most of the major dealer bankers and they have provided a marketplace for banks to deal with one another. There is a credit component that makes these contracts very specific and very credit-intensive.

But what I think is going to happen on the dealer-to-client side is that there will be several technology firms, one of which will win out and create a platform in which

dealers will throw their price into one machine and the clients will access a variety of prices across a variety of dealers through a common platform, as opposed to one dealer having its own proprietary technology, maybe supplied by an outside vendor, supplying its price through its own discreet messaging service to a client. Clients will not want that; they will not want six boxes on their desk. They will not want six different buttons to push when they decide that bank A's price is better than bank B's price.

So all that is the great, wide frontier that we look at, and my sense is that what we're facing in foreign exchange is probably pretty similar to what is evolving in the other asset markets. But I offer that up just as a vision of what we see developing, and hope it's helpful to the discussion here.

MR. DOWNEY: I'll just ask a quick follow-up. You said you don't know which system will win, but do you have any guesses which system will win? Will the one with the greatest interference by a middle-man--will they be able to have enough value-added to compete with just the bare-bones order routing collection and distribution and execution system?

MR. KIMBALL: Well, I think it'll be a system that combines both a front office pricing component and takes that functionality all the way to the back office because, quite frankly, clients today, they are not really as concerned in foreign exchange about prices as they are with lowering their back office costs.

And I'll just give you one anecdote. One of the great users of the foreign exchange world now are fund managers, and when they buy 10 million units, let's say, of euros, they often break it down into 400 sub-accounts. This is a huge business that's growing in a very rapid fashion. Their need for back office simplification is enormous. Their costs have spiraled out of control as they have taken their funds and globalized their investing.

So what we're going to have to look at when we look at technology providers are those that can match up the front and the back office processes all in one go.

MR. DOWNEY: Joel and Chris Concannon here are electronic matching engines on the securities side, and you've got to be licking your lips as you watch all of us build these systems that are basically going to be collecting lots and lots of order flow.

I've been tracking your success on the securities side. I see that you're thinking about applying for exchange status and all that that brings. I was wondering, why haven't you given any thought, or maybe you have, to applying for contract market status in the United States for the futures business as well? These systems are being developed, the pressure is being grown. Why don't you enter and compete with the futures exchanges?

Joel?

MR. STEINMETZ: Well, actually, the thought that says we're not looking into businesses like that is wrong. There's a certainly a thought that says that if the efficiencies and effectiveness of trading electronically work in the securities markets, they certainly should be able to trade in other markets as well, whether it's futures, options, et cetera, or any derivatives play. We are looking into it.

It's important to note that it's not necessarily restricted to the U.S. One of the advantages of the technology aspect is that the world becomes much smaller, and because of that we're able to do things globally a lot easier. And listing any particular financial instruments in any particular place, as was stated, it doesn't matter whether you're in Charlotte, North Carolina, or anywhere else in the world. It's kind of easy to get things together.

What is important to note as I listen to what is being said is that market structure is a crucial point in determining whether the innovation can actually continue. Instinet was a little bit different than some of the others, in that we were not started by customers pushing us to start. We started 30 years ago when technology wasn't as popular as it is now. We just thought that it was the right way to go, so a lot of the changes that we've put in place and a lot of the innovations nowadays have been driven by customer needs.

But it's crucial that market structure is created so that investors are the ones that are actually pushing us down the path, and that innovation is never stifled. And if the market structure exists where you're not able to innovate in any of the platforms, then there are problems.

What we have is the ability to divide--you've been saying about the middle man and making some distinctions there, but what we look at is we have the ability to use technology to cut out the middle man and have trading happen between the interested parties.

By the same token, we also have the ability to route orders to the appropriate exchanges. And what's important to note is that if market structure is done correctly, some of those orders belong on exchanges. And if the exchange is electronic or not is an issue we can get into later if you like.

But the idea that an exchange needs to fulfill its purpose will exist in the future as well. That doesn't mean that value-added brokerage services for upstairs trading shouldn't exist, and the ability of technology to provide both is there. We do it in the equities market and have every intention of looking at ways we can do it in options and futures markets as well, as long as the market structure is there and we're able to continuously innovate.

MR. KIMBALL: Chris, you're a competitor. You're into this to win. How come you don't apply to become a contract market in the futures business?

MR. CONCANNON: Well, Island decided to get ambitious and take on the New York Stock Exchange, and that will be a battle for at least a year. That's one of the reasons why--

[Laughter.]

MR. CONCANNON: So at least there's a year reprieve prior to moving into commodities and futures. I think our technology is clearly transferable to any marketplace. It's highly efficient, it's low-cost, and we're continuously approached by foreigners and U.S. entities to either license or buy the technology outright to use it in other marketplaces.

But Island, the entity, is clearly focused on fulfilling its goals of providing low-cost execution in the equities markets, in New York-listed stock and Nasdaq. Right now, we make up about 12 percent of Nasdaq on the transaction volume side. We'd like that number on the New York side, and we'll be attempted to trade listed stocks in the next few months. That's where our focus is.

MR. DOWNEY: Mike, you're not necessarily in the exchange business, but you have an interesting story in that you had buyers and sellers who needed to negotiate with each other to come upon a price. What is the California energy, and why are you guys into electronics and transfer of risk that way?

MR. KANE: California Power Exchange was really born out of the deregulation of the California energy market. There

was a serious lack of price transparency. California had the highest energy prices in the nation, and so actually the state legislature put together a program to deregulate. As I said, we were born out of that to bring that transparency to the market.

As far as the process, it was a very short process to get everything up and running. It basically started in May of '97 and we had to be up March 31st of '98, so it was a fairly crash course. But in the process of doing that, what we did, along with our consultants, was go out and look at a lot of different trading systems because it was clearly not going to be a floor-traded market someplace. It clearly had to be electronic because this was bringing something new to the power and energy industry.

And we went out and looked at a lot of different systems in a lot of different places, and at that time there were only a few power exchanges, mostly in Scandinavia. So we ended up with a system out of OM Technology which was able to, along with a lot of customization, handle our day-ahead market.

And to give you an example, we run this market 7 days a week for energy, 24 hours a day. So it's a little bit different than a normal commodity market. We have subsequently moved into a forward contract, which is a monthly block contract. But, again, the same provider was able to supply us with a fairly configurable system so we could just add additional products to it.

So as we've seen to date, we did a lot of research on the front end to try to find somebody that was configurable and we've been able to be successful with that at least to this point.

MR. DOWNEY: Before the meeting, I asked you who cleared those contracts and you told me you have your own clearinghouse.

MR. KANE: We do, right, we do.

MR. DOWNEY: And it was really what I was looking for from Joel and Chris, is that there's a need for a clearinghouse mechanism to defend those contracts that are traded. I thought it was interesting that you guys have built that into your system.

MR. KANE: That was one of the basic principles we started with.

MR. DOWNEY: With all this said, we participate on the securities side as well and we're facing very similar pressures. And on the securities side, there is a pressure on the broker-dealer community; it's called best execution responsibilities.

They have many different market arenas where similar products are traded, and it's clearly a responsibility of the broker-dealer to defend the customer and get them the highest bid or the lowest offer.

Paul Pantano, given the technology that is out there, given the close relationship between the securities side and the commodities side, is there at some point going to be some pressure to provide some type of FCM responsibility to provide the technology that gets the customer the highest bid and lower offer without delay?

MR. PANTANO: I don't know if I feel confident to address that because I'm not really a business person in terms of knowing where that pressure is going to come from. But I think that what you're suggesting follows up on something I wanted to suggest to the Commission in this whole effort, which is that the number of potential entrants here is really, I think, broader than the topic of who's out there trading securities, futures and options suggests.

I think the energy example is a good point, but I think you're going to see that there are many electronic platforms out there that are either developed or ready or in development, and that they are trading new products like bandwidth, the energy products. I think you're going to see some entrants in the ag markets.

And following up on something Chairman Rainer said last week up in New York, I think he was saying that it would be a good idea to change the regulatory structure so that starting an exchange would be, you know, an interesting and a profitable business proposition.

And just from what we've seen in our practice with clients, we've looked at a lot of business plans of people who are developing electronic platforms and even though a lot of them are operating in an unregulated environment right now, many of them would like to get into providing either trading or clearing for derivative products or options or ultimately futures contracts. And what I'm hoping is that one of the goals of this group will be to try to come up with a regulatory structure that will make that attractive to people.

MR. DOWNEY: Going back to David Cox here, David, your systems collect order flow from your customers using a browser technology. Is that correct?

MR. COX: A variety of different technologies, but one of them certainly is browser-based.

MR. DOWNEY: Right. Are you able to transmit live bids and offers through this browser-based system to your customer or is a static--they give you a little snapshot? I'm getting to the point of are your customers actually trading online or are they trading via a sophisticated form of e-mail?

MR. COX: A little of both. That has certainly been one of the sore points, the ability to give quotes. Today, when a customer places a trade in our systems, anyway, we do, in fact, give them a snapshot quote. To give them an actual streaming facility for quotes would mean, in essence, we would have to pay exchange fees.

Now, are they doing a sophisticated type of e-mail? I think not. I mean, the bid that they receive at the time that they place the order, generally speaking, we guarantee throughout the system, unless there is an exchange problem. I think we're probably one of the few firms that do that.

Once the customer gets an order acknowledgement back, we pretty much guarantee that rate. And with that order acknowledgement, of course, is a current quote. But, again, it is snapshot in that the customer has to ask for that quote and it's not a streaming type of capability. We also don't have complete authorization to give the depth of the market on most of the exchanges, which customers desperately need, on the retail side.

Again, I'm talking predominantly about the smaller customer, the mom-and-pop. That's one of the segments we serve. It's a fairly sizable segment, but it is snapshot quote and they are fairly small lot sizes as well.

MR. DOWNEY: Do you find that the people who use those types of systems with snapshots--do they send you limit orders or market orders in order to participate?

MR. COX: Actually, a little of both. We're pretty well split between market and limits, a lot of limit orders, a lot of cancel/replaces too, probably the king of the cancel/replaces and probably the most hated firm by any of the brokers on the floor of the exchange. But the customers do, in fact, use it quite extensively.

MR. DOWNEY: Gary, as a professional provider, do you think your users use--not the trade desk, but the professional traders, are they more apt to use limit orders or market orders?

MR. KEMP: Well, I would say certainly limit orders. And to address also this point, our customers, without exception, demand real-time market access and real-time market prices. So we, without exception, through our products provide real-time prices and real-time market depth where the exchanges allow it. And that materially increases order flow through the member firms and materially increases our flow to the marketplace, which obviously everybody wins.

And then the combination of the different order types is obviously mixed depending on what the intent of the player is. Certainly, the professional trader makes much more use of limit orders or stop orders than a market order.

MR. COX: David, one thing I didn't mention that probably is worth saying is that Lind-Waldock has been around for quite some time. As we've graduated toward the electronic marketing over the last four or five years, we have found, in fact, very similar to what Paul was saying, is that the more you give the customers, the more they are willing to trade.

We've found when we do, in fact, give better streaming quotes, better products, better charts, better analysis, they trade a lot more. That goes also with saying some of the electronic exchanges--our customers, if they are--and I'll use somewhat bias here and use some of the exchanges with electronics. But if they are trading e-minis, they trade e-minis a lot more often only because they get 3- to 5-second response time.

If, for some reason, that facility goes down, they then move to the next fastest facility, which could be perhaps a hand-held system. But they will start trading hand-held currencies or products after that. So I guess, in essence, what I'm trying to say is the more you give them, the faster response time, the more they tend to trade, and it's fairly exponential in terms of how much they do, in fact, trade.

MR. DOWNEY: To put a fine tip on it, is it a technological hurdle that keeps you from giving them this data or is it something different, an economic one perhaps?

MR. COX: Absolutely it's not a technological hurdle. We give them in many cases everything that we can. Predominantly, it's an exchange or a pricing--again, if I use the quotes issue, it's simply a pricing structure. Our

customers have a personal quote page that they can receive and they can get up to 40 quotes on that.

If I have to pay exchange fees through a streaming technology for live quotes on all of those, I mean you're talking, in essence, about $500 a month per customer--$200 to $500. And that, for a retailer customer, is a lot of money.

MR. DOWNEY: Island displays their deck in real-time on their Web site. Anybody can go and review it and use it and analyze. Have you found that it has hurt your business or has it provided an economic boon to your business?

MR. CONCANNON: Clearly, it has been an economic boon. We get thousands of hits everyday, all day long, from 8:00 a.m. to 8:00 p.m. And we like to say you can actually participate in the trading crowd on Island. It's definitely a virtual pit, and you get to see the depth of the book and that has become an important issue of late on the equities side, as transaction size and order size are being reduced. You can actually now find liquidity.

There needs to be a display of depth in that market, and even the New York Stock Exchange and Nasdaq are introducing tools that will allow people to look at the depth in the market. And I know right now on the New York floor you can get what's called a look, and a professional will stand in the trading crowd and if he has a very good relationship with a specialist, he can ask for a look and the specialist will show him the depth of the book.

That's exactly what we're doing. You just have to go to island.com and find it. So we think it's an important tool. It's not really a marketing tool; it's more of an individual investor tool.

MR. DOWNEY: Mike, that system of yours, you've told me it was not an API, but a closed system. Do you disseminate prices to the participants and do they find that important?

MR. KANE: We disseminate prices. We actually have two different kinds of markets here. One is an auction market for our primary product, Day Ahead Energy, that closes at 7:00 in the morning. But what we do allow is once the market has closed, we have a small session afterwards that allows people to buy or sell at the closing price for about 15 minutes, okay. So even though we are not open before the market closes, we do allow this evening-up type of period after the price has been established. In the forwards market, we disseminate high/low bid, everything; also, depth up to 5:00. So we cover it.

MR. DOWNEY: And, Raymond, on your Blackbird do the parties to the negotiation know all of the details about the trade prior to pulling the trigger, including the potential price that they would have to trade at?

MR. MAY: There's no hand-holding at all. They negotiate between both parties. All the information is available to both parties.

MR. DOWNEY: Do you find that's a useful thing to have in order to participate on a trade?

MR. MAY: Absolutely.

MR. DOWNEY: Thank you.

Paul Kimball, you mentioned earlier that the foreign exchange market--you mentioned transparency, which I've come to equate with seeing the bids and the offers. Your back office trader is very much needed to do a trade. Do you think your customers also should benefit from being able to see the transparent markets that are available?

MR. KIMBALL: Well, believe me, they do already. The increase in transparency in foreign exchange is--it's kind of like Moore's law; I think it doubles every year. It certainly seems that way. But, you know, the key thing for clients is they have to trade off not only price transparency, but the credit that they possibly might need to do a certain trade versus liquidity concerns. So they've got these three things in their mind all the time.

And one thing that is interesting, even though the pricing transparency has increased dramatically in foreign exchange, and every year it goes up more and more, the liquidity function is still very quixotic, in that foreign exchange doesn't lend itself very easily to capturing all the bids and offers and then getting everyone to stand still for more than a second so that you actually know what liquidity is there to price at a point in time.

And so as a result, it really makes the marketplace very multi-faceted, in that clients that have to do very, very large trades really can't use some of the traditional and even some of the newer technological solutions out there because there is no technological solution for getting an abnormal amount off at a price at a point in time.

So as a result, you still have these many market sectors to solve the riddle of exchanging one currency for another at a point in time. So, you know, it's a very, very

mixed bag. But pricing, again, is the one constant that continues to get upgraded each year through better technology.

MR. DOWNEY: I'm a bit optimistic myself, but eventually someone will get around to writing the software to make your foreign currency problems go away as well.

One last question before I open the floor, and that's to Paul Pantano. Paul, again, I'm going to go back to the same question. I necessarily wanted to ask you on a business standpoint, but hearing what you're hearing, seeing the people that sit around here giving feedback to the Commission, is this a tidal wave that's going to sweep over our business and is going to obviate the traditional methods of transactions or this just a flash in the pan that we're all just sitting around here with technology that is going to go away tomorrow?

MR. PANTANO: I think we're going through a sea change right now. Almost everything we're working on is technology-driven. And just hearing this discussion about price transparency, we tend to work in some of these markets that are just developing and one of the reasons they are developing is that it's a bilateral system where there isn't as much price transparency as some of the big players would like.

And the Internet trading technologies or even the proprietary trading technologies are going to provide that, and they are also going to--you know, if the regulatory structure is appropriate, they are going to provide ways to mitigate credit risk. So I think this is really an interesting time for the regulatory structure to see if it can catch up to the markets because the markets are way beyond it at this point.

COMMISSIONER NEWSOME: Thank you, David, and I appreciate you leading that discussion. And now, as we said earlier, we want to give everybody the opportunity to either comment about this topic area or ask any questions you may have. So the floor is now open to that.

Larry?

MR. MOLLNER: This is a question for David Cox. You mentioned that if there is a breakdown in, say, the order entry system to e-minis that the trader himself or herself will go to the next most rapid execution reporting, something that comes back with a hand-held. So the customer really isn't trading a market; the customer is trading the liquidity of the market. Is that a fair statement?

MR. COX: Yes, I think that's a fair statement, and what I meant by that was if, in fact, they are trading e-minis, they will move along to a market that is very liquid, only because what we do is if, say, an exchange or an API goes down or something along the way, we actually tell our customers on the screen in big, flashing letters, electronics are down. Once we do that, they automatically go over. I mean, they are not specific to any current product particularly. Like you said, they will actually move toward the liquidity.

MR. MOLLNER: So they may even leave futures and go trade equities?

MR. COX: Well, hopefully, they are leaving equities and coming to trade the faster futures now. But speed has been a big boon for us in terms of the market. Our electronic markets have just escalated beyond belief over the last year-and-a-half, particularly over the Internet, and the Internet has been very helpful for us as well. Like I said, over 50 percent of our retail-based orders are coming on the Internet. That's excluding institutions, corporations, and others.

MR. MOLLNER: And just one last question, unless somebody else has a question. When the market fails to give prices back, executions back, when we have very active grain markets, it takes hours to get orders out of the pit that were executed on the opening, and I think there was recently an example in New York with the gold move where we had trouble getting orders executed in or out of the pit.

Do you have a comment about how that affects your business and/or the futures business in general? I hate to put you on the spot.

MR. COX: This is David Cox. I assume that's directed at me again. Obviously, it has rather catastrophic effects on us. The incident in New York that you spoke of--and occasionally on hot markets it does, in fact, take--it's not minutes to get confirmations back on trades, but it is catastrophic only because we can't in many cases tell the customers where, in fact, they stand on a particular trade.

And they are poised, ready to make a number of other trades, and we can't tell them where, in fact, they stand on their original--for example, the gold trade in New York, and it took literally days to figure that out. So, yes, it's catastrophic for us.

MR. LEITNER: Can I ask David a question?

David, you talked about the e-mini and, of course, your firm kind of got a pioneering no-action letter to get that product up and running, for which your competitors are forever grateful. You talked about market data, though, as being a key component of having customers interested in using a product--real-time prices, access to that data--and the expense of that data being actually an impediment to spreading the word, if you will, to those customers who want to get real-time prices.

This has been a hot issue in the securities markets. The SEC and Chairman Levitt have talked about bringing down the price of quotations, which are handled, I think, a little differently from an organizational point of view in securities land, through a central price collection process.

Is this an area that the Commission ought to intervene in any way, or should the exchanges be able to charge whatever they want, and if so, are they shooting themselves in the foot?

MR. COX: If that's directed at me, with the exchanges on my left here, I think they are in many respects shooting themselves in the foot. Some of the exchanges are, in fact, addressing the quote fees and the quote fees that they charge. But we also understand that that's a fairly significant amount of revenue for a lot of those exchanges. And I'm not just talking about the domestic exchanges, some of the foreign exchanges as well.

So is it something that the Commission should look into? Perhaps. I would say that certainly wouldn't be such a bad idea. It does have a rather dramatic effect on our customers and their ability to trade, and certainly we would welcome the capability to give a customer a quote when they actually want to trade a product.

COMMISSIONER NEWSOME: David Downey, one of the things you asked many of the participants was what was the driving force behind their change. Given the improving level of sophistication from customers, do you think the changes that we have currently made are going to be satisfactory, or do you think they are going to demand more and more change?

MR. DOWNEY: This is David Downey speaking and not a representative of a particular FCM. I believe that the focus of these changes have been on the wrong people. I think that the list of people that were here on Thursday of last week are not representative of what the future is going to hold for the financial transaction business, and yet they predominate the discussions. I don't think that they are

going to be around. They are not business people, they are well behind the time, they come looking for protection.

Now, you can decide to take up your time and hash out those political arguments with people who will eventually lose economically. I think that you should focus on the protection of the customer in whatever eventuality prevails. That is the true goal of the CFTC. At some point when all of the smoke clears, customers will be transacting in the markets and you want to make sure that they are doing that on a level playing field where they have a fair chance to compete and to win, without any structural impediments that keeps that from occurring. And you should spend less time listening to economically-disadvantaged groups who are trying to bail their butts out.

COMMISSIONER NEWSOME: I would like to ask if any of the other Commissioners have any questions or comments.

[Laughter.]

MS. DOWNS: I can't let that go without a comment. I think that the group that you're referring to--some of them represent the exchanges, and I think that we deserve, just as you deserve, an opportunity as a business person in these markets--the exchanges deserve the same opportunity to reduce our regulatory barriers and all of the things that we're hamstrung with to proceed so that we can compete fairly.

COMMISSIONER NEWSOME: Okay, thank you, Yvonne.

Any other questions to this group?

Phil?

MR. TODD: My name is Phillip Todd. I'd like to ask anyone on the panel who cares to answer it a general question about liquidity. The general consensus seems to be that the increase in transparency is likely to improve the liquidity of markets. Given that increasing transparency may also tend to reduce the insiderness of exchanges--in other words, some of the advantages that both floor traders and upstairs dealers may currently enjoy--is there anyone who is concerned that increasing transparency might have a negative impact on liquidity?

MR. STEINMETZ: I'd like to try to get that. This is Joel Steinmetz from Instinet. We actually have several trading systems in the equities markets. One is an intra-day system on which we trade about 170, 180 million shares of

equity order flow a day. And then we have what we call a crossing network which trades after hours, trades about 20 million shares at night.

The intra-day system has a substantial amount of transparency, some of which is not necessarily due to us, but more so due to the requirements of the specific markets. The SEC order handling rules have required orders that go into the public quote. So there's a lot of transparency that has to go in there.

What we have found is--I believe Mr. Kimball hit on it--there are different sets of customers, and some customers and some orders need substantial amounts of transparency. And because of that, they've gotten an awful lot of liquidity. And Island is probably a good example of how successful you can be by actually being very transparent.

We deal with a different customer base in a lot of ways than Island, in that we deal with a lot of the institutional order flow. And institutions, in general, are a bit weary of putting all their order flow out and being totally transparent, so there is a fine line that they have to walk.

The reason why our crossing network is as successful as it is at night is because it's complete black-box, where there is no transparency. And orders just go in and it's after-hours so it doesn't necessarily affect the market. So the effects on liquidity of transparency are obvious in the equities market. The more transparent you got, the more order flow came in from one segment of the market.

The other segment needs tools, and hopefully they are technological tools, that can enable them to trade in the equities market blocks of stocks with minimal market impact and minimal opportunity cost. So transparency is not always the full answer for ultimate liquidity.

COMMISSIONER NEWSOME: Thank you, David, I appreciate you leading that discussion.

Before we move to the second group, we've had several participants that have joined us since we started the group I discussion. I'd like to ask each of the four to introduce themselves and tell us where they are from.

Marc, we'll start with you.

MR. GERSTEIN: I'm Marc Gerstein. I divide my time between the MIT Sloan School of Management and a consulting practice that has for nearly 30 years or so heavily concentrated on financial services. I help various

investment banks in their run-up to big bang in London. A little tiny firm called O'Connor makes a very important impact in the Chicago world back when these were obscure products and guys like Black Shoals and Merton were not on the cover of Time Magazine.

MR. WOLKOFF: My name is Neil Wolkoff. I'm the Executive Vice President of the New York Mercantile Exchange. I've been with the exchange for about 18 years, and the NYMEX predominantly trades physical commodities, energy, precious metals. Listening to the conversation, I could simply say I'm the EVP of one of the remaining tyrannosaurus rexes, somewhat out of fashion but still rather robust and tough.

Thank you.

MR. ELEY: My name is John Eley. I'm with the Cantor Exchange. We're an exchange, but not the tyrannosaurus rex variety. I'm responsible for operating the exchange and product development.

MR. GARFIELD: I'm Rob Garfield. I'm the Director of Commodities and Energy for Reuters and I take care of strategy for the Americas.

COMMISSIONER NEWSOME: Okay, thank you, gentlemen, for joining us. I'd also like to introduce Walt Lukken. Walt is with the Senate Ag Committee staff and is a very active participant in what goes on here. Walt, we appreciate you taking time to come over this afternoon.

Tony, we'll turn the next part over to you.

MR. LEITNER: Thank you very much, Mr. Chairman, Commissioners. I appreciate very much the opportunity to be here. This is such an important topic.

I'd like to introduce the participants here who will be addressing topic II, which is the effects of the new technology that we've been hearing about. And we're fortunate, I think, to have folks who have been in the middle of the futures markets for, you know, really quite some time--Yvonne Downs from the Chicago Board of Trade, Dave Dugan from the Merc.

Neil Wolkoff, whom you've just met, from NYMEX, sort of represents certainly the organized exchanges. John Eley, of Cantor, is, of course, in the emerging side of the business. And we have Peter Lee and Steven Spence from Merrill Lynch.

Merrill Lynch is large enough to rate two participants on the panel.

To sort of kick things off from our side, I thought I'd just give you a little bit of perspective about the way I've seen things because I've been at Goldman Sachs for 20 years and so I've seen a lot of things happen in the markets. At one point, I was the senior counsel for our futures business and that's a robust business. And we're futures commission merchants around the world. We participate in foreign markets, as well as domestic markets.

More recently, however, I've been counseling the equities side of our business, and very much counseling the electronic trading aspect of that business. We recently acquired a firm that is a proprietary trading firm that uses technology extensively particularly in Europe to trade derivative products on the screen-based exchanges, and also is a very active market-maker in the listed options markets in the United States and, of course, as a result, participate very heavily in the futures markets as well.

I'd like to just react to a couple of things. Certainly, the question for the United States, I think, is whether we're going to see some of the same sort of convergence trends as have happened in Europe. And by convergence I mean not only the convergence of common platforms, more straight-through processing or efforts to have straight-through processing, the desire of exchanges to try to consolidate their order flow and maybe centralize it in different ways, to get data out to folks so they can trade, to provide for as much direct access to the markets as possible through sponsored access or even access by non-intermediaries.

I think the aspect of the trade point exchange in Europe is very interesting because not only did they get an order from the SEC to allow them to establish their terminals here, but they permitted as members folks who are not registered broker-dealers in the United States.

The second thing in Europe is, of course, that a derivative product can be traded on a common platform, whether or not they are securities or futures. They are commonly cleared and they are cross-margined. Customers of our foreign affiliates have a single account at which all of their positions are recognized and reported and are commonly margined.

We are a long way from that kind of efficiency in our markets in the United States, and I think one of the themes that hopefully this Commission will get to address is whether or not ways can be found to provide to customers--

and I agree entirely with David Downey that customers and their needs, as well as the issues of risk in the system and how it should be controlled and monitored, et cetera, create themselves a sufficient, I think, justification to work some of these issues out that cross jurisdictional lines.

And so while there may be a crossing of a need to look at a bunch of things that are happening in the over-the-counter markets, in products where the regulatory status of those products is a little less clear, the fact of the matter is that even in our organized exchange markets there are barriers to the ability to feel the full beneficial effects of technology.

And our panel is focusing on effects of technology, and we have to ask ourselves what's the brush that has to be cleared away to get the full bang for the buck. Some of those inefficiencies are economic, others are jurisdictional, and all the innovation and all the technological power in the world will not solve the problem.

What may solve the problem is the fact that the business can be done in Europe and if we don't sort it out, it's very possible that it will be because these platforms and these efficiencies are being built abroad and our customers are going to find a way to get those efficiencies, particularly where you can trade 24/7, as they say.

I needed to be sure that I made my comment about the common trading platform. This Commission has heard that from me and my colleagues for some time, and we know that it can't happen without certainly a lot of cooperation between the staffs of this agency and your sister agency on the other side or town. But we certainly hope that, you know, a way can be found to get that done, particularly in cases like clearing where there already is inter-market clearing and inter-market margining.

What I'd like to do to kick off our discussion about the effects of technology is to give the exchanges an opportunity initially to talk about how technology has affected particularly the order flow to the exchanges, what they've seen in terms of the reaction to the things that they have done in response to technology, given that they are still both a combination of floor and screen-based environments, and kind of how they continue to react. And we're fortunate because the exchanges have somewhat different products and different models, and therefore to some extent different users of those markets.

Yvonne, would you like to start out, please, and talk about the CBOT?

MS. DOWNS: Sure. We use technology in every aspect of the business, whether or not it is our order routing system, of which we either have an open API and we take all the parties in and process that activity on a straight-through basis. We use it on our own proprietary order routing systems. We use it also in our electronic trading system, called Project Day, and soon to be the EUREX Alliance System. So we're using technology in every aspect of our process.

And, in fact, over the last couple of years, just as technology has brought additional players into this perspective, we the exchanges have also seen a significant amount of our activity being enhanced with the use of technology.

We now have more than 25 percent of our orders flowing in and out of the exchanges electronically, at least at the Board of Trade, and I believe the Mercantile Exchange would share that that is a continuing trend. We also see that from a retail perspective all of our firms are using Internet activity from the front end, and they are all connected to the front end on Internets. But they don't use them on the back end; they don't use them when the responsibility becomes their own. That's when they start flipping from using Internets into proprietary systems, and that has been the trend we've seen.

I think that also this has led to a difference in how the systems are working. Currently, although we've seen a big influx on the front ends, what we haven't seen is the same trend on the back ends from the risk perspective and from the payment side. So as much as we've seen a lot of technology coming in on the front, the technology in trying to get those orders in is ahead of the technology necessary to give real-time vetting of that activity as it comes in the door. And that poses risks to everybody, whether it be the intermediaries, whether it be the exchanges or the clearinghouses in that process.

So we've seen a significant addition of technology, but with that technology comes additional risks. And I'd point that out that we need to look at both sides of the equation as we go forward.

I think the other side is that technology gives us a way to reduce our regulatory barriers. We use technology in surveillance on a continuing basis. We have a state-of-the-art system. Just as we built technology, we added surveillance to go with that so as to look at the risk that is being posed in the market from all of the users.

We would say that the barriers, therefore, are still in the regulations. We now have a lot of regulations, a lot of procedures and requirements that are mandated that could be reduced because we've now got more sophisticated systems in which to look at that activity. We're no longer dependent on a piece of paper or someone feeding us information that indicates there's a problem. Our own systems can be used to detect patterns of conduct that are a problem.

But we still have to protect those customers, and so I think there's a balance that has to be struck between the front end and getting the business and protecting it and keeping it fair and honest for the users.

MR. LEITNER: Thank you.

Dave, do you want to address these issues from the Merc's perspective, please?

MR. DUGAN: Oh, sure, I'd love to. Macroeconomically, I'll tell you we had a very good year this year, thanks to our vendors and our firms and the staff of the exchange and our members. The Merc has processed and will process close to 20 million orders in '99. This is up more than 100 percent from our '98 levels. These orders will be on behalf of all North American commodity markets, 75 percent of which are our products and 25 percent of which will be routed to all the other major exchanges.

These orders are originating from more than 30 FCM and ISB systems today, and so that distribution is expanding everyday. And the good news is that we're kind of at the--I believe we're at the inflection point right now, in that we're going to see a dramatic rise in this again next year. So more than 100-percent growth next year would be very likely at this point.

These systems are presenting every FCM a look at our contract markets, and with the inception of a new global API that we created for this year, we blended together full product access for both our open outcry contracts and 100 percent of our electronic markets. So that transparency in terms of product access is also giving people a better look at and better operational efficiencies in working with us.

On the market data side, we are also working aggressively at changing both our pricing practices and the way that we promote and distribute our data. For the longest time, the Merc was a pioneer in offering real-time pricing off of our Web site, as well as delayed prices. We also had delayed programs for free contract markets for pricing a lot

of our e-mini quotes as well as our currencies and other Globex emerging products.

Those products are available today in terms of their pricing, and we do have a lot of our participants in the FCM and ISB community that have snap quotes on our prices. However, structurally, David Cox pointed out that we have impediments. We have impediments in that there is an inability on behalf of our 125 market data vendors for which we integrate--and I know Reuters is here today--to price in the same way that the Merc would like our products to be priced.

In other words, they cannot bifurcate our free prices versus the prices that we choose to charge for, and also they don't differentiate between classes of customers. As a result of that, we've been endeavoring to build new pricing services on our global fixed API strategy. Those prices will come to the market next year and you will be able to have prices in a way that I think is more conveniently accessible, and lower costs to the full breadth of market participants out there.

There is also an announcement out on our Web site. You've probably seen it. We do offer $10 retail quotes per month as well. So we're really changing a lot of both the pricing structure and technology, as well as the full product access. And I think that that whole part of our distribution on pricing strategy will help us, I think, a great deal as a market center.

On open outcry specifically, we reengineered a new deck management system that got rolled out across most of our top 30 product markets this year, especially those as ranked by transaction volume. Because of that, the member firms were then signaled to the fact that they can get fast electronic straight-through processing to our major product markets.

And that product will be extended through the bulk of the rest of our products for next year, and hopefully that way we're giving an efficient look at the full range of our product set, both open outcry and electronic trading, where all the non-valued-added labor is squeezed down.

Now, with that said, I would tell you that the participation in these electronic order entry systems and straight-through processing has been heavier on the wholesale, retail, and broker-introduced retail markets, and less so on the institutional marketplace. And there are structural reasons for those which I think we can get into in a little bit.

Thanks.

MR. LEITNER: Thanks very much, Dave.

Neil, do you want to give the perspective from New York? We can't let Chicago have the complete floor here.

MR. WOLKOFF: Sure, because unfortunately it always seems like I have something a little bit different to say anyway, not that they are wrong, but I think that the product mix really creates some major differences in the way some of these issues can be seen.

Just to go back to my last comment, the last time I was heard from I was analogizing my institution to a tyrannosaur. But looking at the other aspect of it and taking it in a somewhat kinder light, when I began with the exchange, which was in 1981, I was an alumnus of the CFTC, as were a number of other people at this table today. NYMEX was really a very far different institution. Although a few years ago we celebrated our 125th anniversary, at the time the exchange was coming out from really a period of years, decades, almost generations of misery and absolute failure.

The reason I bring that high point of our institutional history up is that I have some personal familiarity with what is involved in actually building a business. And I'm certainly not taking personal credit for that, but the team that I work with, we take a lot of pride in the fact that over the course of years we took something that was essentially non-existent and built it into an international financial institution. The bedrock of that happened not to be technology.

So I do know a little bit about building a business. I know a little bit about what it takes to build a business, and I know a little bit about wanting to be successful. And there's a lot of people that want to be successful. At NYMEX, we know a bit about being successful, so let me distinguish myself from some companies that are at the "want to be" and not quite at the "am" stage at this point.

I think from technology's point of view--and the reason I look at it a little bit differently is I think that there is a dream of straight-through processing. And I think from the member firm perspective, even from the exchange perspective, it makes a tremendous amount of sense. And it's a goal, it's utopian goal, without meaning to be negative about using the word "utopian" that it's unrealizable.

I think that the basis problem is that there really are two very discreet aspects of the market. There's the front

end of the market, and that's the customer. And then there's the back end of the market, and we can either leave the exchanges just simply the cog in the middle that is not recognize or we can include it.

But the front end where the customer needs to make a decision, place an order, get market information and transparency, and put his business in, is very different from the processing end of the business, the risk management, the banking, the movement of funds, the concern about the collective customer exposure. And those concerns really have different needs.

The technology for the customer also is very different, if it's a retail customer, if it's a commercial customer, and also if it's kind of an insulated business as opposed to a diverse and highly spread out business, such as, I would say, the energy business is in that respect. And to the extent that the retail customer wants to use the Internet, I think it's beyond debate that that is the direction that the markets will go.

And to the extent that exchanges want to have retail clients, exchanges need to improve--in our case, almost need to create the electronic connection between that retail marketplace and the exchange market. We have not been particularly successful to date doing that.

And I think someone brought up the case of gold. Gold trades on the COMEX, which is part of my exchange. It was really gold options and was a very interesting case in point in how the Internet interfaced with the marketplace, a marketplace which hadn't had probably more than a $2 move, you know, extremely low volatility in 15 or 20 years and had staffed up for that.

Well, you began getting this retail order flow coming in through Internet-based clients spewing out what essentially were orders onto the trading floor, with basically no intermediary taking care that those orders would be taken care of. And I think we all, not just the NYMEX/COMEX, but I think everyone in that chain outside of the customer needs to make that more of his problem and not just have a criticism of an exchange or even a criticism of a customer. That needs to be controlled, you know, quite a bit better, and I think we need to live with that and get ourselves educated.

But also on the front end, I would say NYMEX has had an electronic trading system now since 1992--1993, excuse me--the NYMEX Access System. And it has been interesting to draw lessons from that because, although not free, the system

does provide full depth of market. It's transparent. The price reference is immediate.

And we have that system from 4:00 p.m. through 8:00 a.m. 4:00 p.m. is 1:00 on the West Coast. To show how bright I am, I can do that calculation quickly. And 8:00 is 1:00 in London, so it does coincide with some very active time periods around the world for worldwide system. And yet the system has consistently grown with daytime trading, but has never exceeded a 2- to 3-percent market share for NYMEX, despite our best efforts, and so there is some aspect.

The customer has been telling us that at this point for those commodities the customer is preferring a different front end than an electronic front end. From the back end, however, the processing--and this is where we've really been putting our money over the last five years, is in the clearing aspect, the Clearing 21 system, trying to put the trading floor online so that whatever happens between the time that customer places the order, it becomes automatic out to the firm.

And our goal--certainly, my goal is to try to remain uninterferring to the extent the customer doesn't want to be interfered with, but also to make the use of electronics--make the order flow on the back end post-execution as smooth as possible all the way through the bookkeeping system out to the customers for risk management.

And that may ultimately be, I think, a commonality that a lot of us around this table have, and that may be a service--you know, I think of it sometimes as the next killer ap, you know, the third-party vendor that figures out a way to take all this disparate information and make it not disparate, consolidate it, translate it into one common format. Somebody used the term "common message switch." That's exactly what it is, make it all look the same no matter how it comes in in the first place. It's a good idea and, you know, it's a pretty good dot com business, I think.

Anyway, thank you.

MR. LEITNER: Thanks very much, Neil.

John Eley, from Cantor, you folks have gone entirely electronic. How is it going, and what are you learning from your experience to date?

MR. ELEY: As I think is fairly obvious, we're obviously big believers in technology and what technology can bring to the marketplace business, specifically exchanges. What we've found over the last 18 months that we've been an exchange is

that technology brings some very obvious things to the business and some not so obvious things.

The obvious are speed. Speed of execution is measured in fractions of seconds as opposed to entire seconds. Transparency. Anybody who is looking at a screen, be it one of our own screens or one of the screens that the data vendors provide, have access to the exact same information that anyone else looking at those screens has. So there's no inherent advantage to standing in one location as opposed to another.

Additionally, one of the things that some of the traditional exchanges have talked about which I think we knew in the beginning but did not appreciate was the extent that being fully electronic impacts the regulatory responsibilities of an exchange.

When you have people talking on telephones and signaling to each other, it implies a certain level of oversight and a certain level of detail and a certain number of bodies, frankly, that you need to have to look at each one of those transactions and to make sure that they are aware they are supposed to be conducted in a manner that is outlined by the CFTC.

When you have a perfect audit trail, either someone talking on a recorded line and then it being typed in by another person, or better yet somebody typing themselves and it going all the way through the system and being executed, you're able to look at those transactions and review them in an automated manner that you wouldn't be able to do in open outcry.

Additionally, obviously an electronic exchange has a leg up on the straight-through processing side because when the customer types in and then it simply ends up automatically in their own back office, you are a number of steps closer to straight-through processing than when you have a great deal of human intervention.

A point that you touched on earlier which is something we care a great deal about it and we've started to see in our marketplace is convergence. Cantor Fitzgerald, of course, is an inter-dealer-broker on the cash side. The Cantor Exchange is a joint venture between ourselves and the New York Board of Trade.

Currently, we operate in a way that a customer, if properly approved and if properly set up, can trade both cash and futures on the same system. Additionally, we have a cross-margining program which will be rolled out either late

this month or the beginning of next month between our clearing corp, which is New York Clearing Corp, and the GSCC which will allow futures and cash, U.S. Treasuries, to be cross-margined for the first time.

We want to see that convergence, which right now is just simply between two, a cash product and the related future--we want to see that extended to many other products--European cash securities, European futures securities, potentially some of the other futures products.

And the convergence of all those products on a platform--as it operates now, it is a centralized marketplace. It's a common platform and it's a common portal into that platform. Obviously, the killer ap that Neil referred to would as easily apply to our interface as any other. The front-end piece may be a third-party vendor or it may be one of our own, which we give away.

That convergence, I think, will probably start to--we've seen the beginnings of it now and we'll see more and more of it as time goes forward. One of the most important pieces on the convergence side--and it's related to the earlier point on the regulatory responsibilities--is how it impacts risk. If you have a centralized electronic marketplace, if you have a converging manner for different types of trades to enter into this marketplace or many marketplaces, it allows you to automate the credit risk function, market risk function, and obviously all the processing. And that's a piece that we are seeing on the Cantor Exchange, and I think we'll probably see more and more of it going forward.

You asked a question about how we are doing. I think on a number of fronts, we're doing extraordinarily well. We're up on the playing field, we're competing. Everyday, we trade a certain amount of volume. Some days, it's large by new contract standards; some days, it's small by new contract standards. But what we are doing is we are going through and building piece by piece the foundation on what we think is going to be by any standards very successful in the near future.

MR. LEITNER: Just sticking with this John, I mean part of the goal here is, of course, to help the Commissioners with the job that they are undertaking in considering potential, you know, things that are in the rules now that ought to be looked at again.

And, you know, because you're new and you had to get off the ground with, you know, challenging some of the traditional ways that futures were traded, did you get

everything you were looking for from the Commission in terms of, you know, giving the best possible model for your customers? And if there were any things to change, what would they be?

MR. ELEY: The staff and the Commissioners of the CFTC have been extraordinarily insightful, extraordinarily diligent in what their responsibilities are from our perspective, and have offered extraordinary--"support" is not the right word, but I guess insight and turnaround.

I don't think that there is--I mean, we always want more. I mean, we're in a business and we're business people, and I think if left to our own devices, there would be no end to what we would want. But given the infrastructure that we work under, we certainly have no complaint or issue with what the staff or the Commissioners have provided for the Cantor Exchange.

MR. LEITNER: You, of course, trade a product--

MS. DOWNS: Can I comment at this point?

MR. LEITNER: Yes, please do.

MS. DOWNS: Sorry. I can't resist. A couple things. You said that technology provides a perfect audit trail. Sitting here as a regulator, which is one of my other jobs besides handling order routing for the exchange, I have to disagree with that.

I happen to believe, and have seen that the electronic trading systems can facilitate abuse, not necessarily obviate abuse. What happens before something is entered into a system and what happens after it comes out of the system on its first pass-through is still potentially an area that needs to be monitored. And I couldn't sit here and say that we have a perfect audit trail just because there's an electronic trading system out there.

But, secondly, there are things that the CFTC staff, although they are very helpful, they do give us a significant amount of specificity with regard to rules, regulations and procedures that we must follow, audit trail being one, to be perfectly frank, as well as others that we're mandated to carry out and spend a lot of resources and time, not only our own resources and time, but all our intermediaries' and FCMs' resources and time, in addressing and staying in compliance with that.

And I think that in today's technology, both of those things have to change. I do think exchanges take their self-regulatory responsibilities very heavily and monitor extensively our markets, and therefore I think that we need to lighten our burden. And I would include the New York Board of Trade and Cantor as well in that.

MR. LEITNER: Thanks, Yvonne.

MR. ELEY: Can I comment?

MR. LEITNER: Yes, sure.

MR. ELEY: With regard to perfect audit trail, I think in any circumstance there's obviously gaps where somebody can jump in. Regardless of technological platform and technological level, there's always room for someone to sneak in the door and to tweak it to their own advantage.

However, if you take an example that we would use being almost perfect, which is a customer who has an electronic system, they enter in an order, the order routes through an FCM of some type. The FCM has some sort of credit filter or credit monitor. It then runs through an API into a centralized electronic trading platform, is then matched with the other customer, the trade executed, it goes through to the clearing member. That is an outstanding audit trail from my perspective, as good, better, than anything I can imagine in any other circumstance where you have human intervention.

MR. LEITNER: Can I just--I think we need to be careful not to move along. I'd just like to make one quick point about this, and that is that, you know, figures lie and liars figure and all that, but it's a question of what rules you're talking about auditing for.

If you have in futures land a rule that says that people can't talk to each other before you send an order to the floor or you can't solicit the other side of an order, first of all, for Goldman Sachs, you know, that trades $1 billion of a stock, you know, on the run, to be able to not go to the other side before you actually commit that capital to that order would put us out of business pretty quickly, not that it's a profitable business to begin with.

But, you know, in futures land if you have a rule that says you go to jail if you do that, yes, it's tough to audit for that, you know, electronically. It doesn't really matter. So one of the questions--and if, by the way, you have to enter the order in an electronic system and you're

entering the order and the rule requires that you must designate the customer on the order, physically designate, write it down, the name of the customer on the order, and it's an electronic system--and in Mr. Kimball's example, it happens to be an investment adviser who is going to divide it among 400 sub-accounts at the end of the day--what order are you going to enter? What are you going to put down? So there are a couple of things in the Commission's rules and in the exchanges' rules that, you know, deserve a second look in the technological environment.

With that said, let's get to the intermediaries because we have Peter and Steve who are here from, you know, the intermediation side. And then Marc is going to kind of wrap up for us all. So if we could just do this in a couple minutes because we do want to open this up also for questions.

MR. SPENCE: It's interesting to hear the perspective of the exchanges as it relates to technology out there. I guess I've been back in the U.S. in this position for two years and I have to say I was a bit disappointed in the lack of foresight of the exchanges two years. So that being said, they've come an awful long way in the past couple of years in grasping technology and what it really means to us as an intermediary, us the FCMs out there.

I think it was David who mentioned, or put the forth the question at the end of his panel, is there a wave coming. As far as the exchanges have come, I think the wave that's going to hit next year is extraordinary, and I think we, even in the FCM community, might not have grasped how overwhelming it's going to be, never mind the exchanges out there, what it can do to us in the illicit derivatives realm and beyond as the other liquidity products become as commoditized as we have been over the past eight to ten years already.

It is going to change the way we deal and look at our business considerably. As much as we try to grasp and hold on to our existing way of doing business, the economics of it is going to push it along and it's going to be a bit of a self-fulfilling prophecy out there. The efficiencies that have been alluded to overseas in some of the Asian and European markets that have already gone electronic have yet to have been accomplished here, and that's going to drive us as intermediaries, and our customers as well, to either accomplish it here very, very quickly or to go offshore, which we would all hate to see happen out there.

That type of revolution--I think evolution is not reflective of what is going to happen here--is going to push alliances, I think, and mergers, joint ventures that we've

not yet seen before between unlikely partners. The exchanges, in their attempt to recreate themselves, I think will be aligning with unprecedented partners, possibly with Wall Street and possibly with the other side of the realm on the other coastline with technology initiatives, things of that sort.

It's really going to be a different realm, and where does it all lead to as far as regulatory issues and, again, the way we're been accustomed to doing business? And, again, I talk a lot primarily here to institutional, which is my side of the business, not retail. The dealer-dealer concept which has been prevalent in the fixed-income realm is going to become a question of do we start doing business in that way on the illicit derivatives side as well.

Is there a need to go to the floor for price discovery? Does price discovery drive the pricing of the transactions on the floor? Is it the swap market driving the price discovery process out there? These are very, very difficult questions that we're all grasping at out there, the regulators as much as the broker-dealers and FCMs out there.

You know, the block trade proposal that Cantor has put forth is, I think, only the beginning of that transition that we'll be going forth with over the next couple of years or six months, as I've alluded to. It's going to be fascinating out there, and I think the conversations we're hearing right now are very much just the beginning.

I mean, I could kind of ramble on and on, as I have already, as this relates to our world. But it is fascinating and I think the ground work that we're throwing out there is going to be very, very important going forward.

MR. LEE: I'll throw out my little advertisement for Merrill as the exchanges did for each one of them. You know, Merrill and Charles Merrill, I guess, became famous with talking about bringing Wall Street to Main Street, and I think Merrill now, as quite honestly just about every other major firm in the industry, has realized that Main Street has changed.

Just about every household in America now has a computer, is connected to the Internet, and the way we've all done business over the last umpteen years is going to change. I suppose 25 years ago when I got into the business, I never would have figured I'd be sitting here talking about technology because the most memorable comment or conversation I had with my parents after my freshman year in college was why I was on academic probation for never going to a computer science course the entire year.

Past all that, Tony and I were talking yesterday, you know, and we were talking a little bit about what Yvonne got into, and there was also a question from down there on the first go-around. And what is it going to change, I guess, and how is technology going to affect order flows?

And one area that I've found interesting, since Steve has folks from London sitting in my office constantly getting me prepared for what is going to happen in Chicago, is the fact in the equity option world, for example, in London, where they had a great little market on the floor, they had great price discovery and it worked very efficiently just like Yvonne's market does, David's market does, all the open outcry exchanges do. Now, it's electronic.

But it's funny. A customer calls Merrill Lynch and they say, give us a price on xyz option, and we look at our screen and we say there's no price there on xyz option. So we call our over-the-counter trader and say make us a price on that xyz option. And if we like our market that our guy gives us, fine. If we think--doing due diligence for our customer, we will call a professional trader and say give us a market at xyz option.

And we're going to pick the best market for our customer and we're going to trade that over the counter. And really what we're doing is we put it up electronically with the exchange, match the trade, put it up, key it in, buy, sell, done, gone. So on the back end, it's all done electronically. But it has taken longer, it hasn't been as efficient, and may not be.

I'm not saying anything is right or is wrong ever being done, but I'm saying it's a different mechanism where we all think that technology is going to move us, and it is moving us into a more accurate and better way to do things, I suppose. I find it interesting, though, the way it's working right now over there after, what, six months, eight months, maybe a little longer now, is, I would say, going in reverse.

MR. LEITNER: Well, that's probably the best advertisement the exchanges have had.

Marc, do you want to wrap up a little for us?

MR. GERSTEIN: Knowing that we're short of time, let me try to do this briefly. I have a different background, as I said, and so let me sort of step back and up and try to frame the discussions around the table in a different way,

and hopefully in a manner that helps the Chairman and Commissioners to think about this problem.

We have, you might say, a very complex design problem. The proverbial playing field that is either level or tilted or whatever is in the process of being reshaped, and technology is one of the driving factors doing that. But the major issue is how does one think about this kind of design problem and the approach that environmental shapers, like regulators, have to determine the outcome or influence the outcome in some way.

Now, one approach is the sort of bottoms-up, largely micro market manipulation approach that has characterized a lot of the way that these things have evolved around the world. But the other approach is a more top-down conceptual one which I would strongly recommend and which I think Chairman Levitt is beginning to adopt in the securities market.

But to do that, I think it's very important to have the answer to three questions. First of all, what are the factors that shape the evolution of the market, not only this market but any market? Ironically, this is not a badly studied problem. It falls into the academic discipline known as coordination science, and basically it's applicable whether you're studying the evolution of the 19th century railroads, the evolution of hubbing in the airline industry, or the radical growth of the Internet over the last 20 years.

What is important is understanding why some things have changed like the Internet and other things have changed in other directions. Now, without getting into the details because we don't have time today, one must have a deep understanding of both the benefits of coordination that technology brings as well as the costs. And we've been talking a lot about coordination costs and benefits as we've told our stories around the table, and so that's one thing that I think we need to understand in a very deep way.

The second issue is we have to understand how these things change, what is the pattern of change of things like markets. Now, an assumption is that these things change incrementally and slowly, but the evidence is that that is not the way it works at all. The evidence is that change in markets, as in change in many things, is a lumpy process, and that it goes from one phase to another, phase being defined in the physics sense like water and ice are two phase of the H_2O molecule.

And what a lot of people feel is that we're approaching a phase boundary in the structure of this market.

Understanding the difference between being on an incremental change path and approaching a phase boundary makes a very big difference in how you deal with change.

For example, if you've been driving all day and the temperature has been dropping and it started off in the 60s and now it's approaching 32 degrees Fahrenheit, is it really the fact that it's going to change 1 degree in the next half hour significant? Is 1 degree a big deal? Yes, if it's at 32 degrees, not if it's at 42 degrees. If we are approaching a phase boundary, we have to be very careful about fiddling with micro market structure.

The third point is that I think that there's an issue of what should be the way that people work together, whether they should work as adversaries basically defending vested interests or whether or not people should adopt a posture of trying to define a more efficient playing field for the market as a whole, knowing, as a number of participants have said today, that the efficiency of America's capital markets are what is at stake here.

What is different today than I believe almost any time in the past is that the capital markets themselves are moving into competition with one another. And the issue is--and I think as Tony said earlier, but let me put a sharper point on it, the world's investors and capital-raisers are either going to do business in America or they are going to do business somewhere else. And I, for one, want them to keep doing business here.

To do that, we have to build the most efficient capital markets in the world, second to none, and that means that a lot of the intramural problems between politics and regulations and competitors, et cetera, have to be put aside so that we can build those markets.

When you look at something like Trade Point or you look at some of the European markets with side-by-side trading and cross-margining and fully electronic systems, when you see in some of those changes how people playing traditional roles have lost 90 percent of their volume overnight as markets have moved from one market structure to another, you know that there's a very serious change at work.

And to imagine that just because American markets have been grandfathered with certain benefits, and we have enormous innovation here, that we can't have the bottom ripped out of this if we're not careful is, I think, a tremendously great oversight.

So my sense is that we've got to understand this problem and what the nature of the change is. We have to understand it conceptually and historically. And the third thing is that we've got to make a decision about how as a collective community we want to attack this problem. And that's not just the people around the table, whether it's the technology boys or the old exchange or the dinosaurs, or whatever it is we want to call ourselves. But it's not just that; it's the various regulatory bodies that are involved.

This is politically one of the most complicated change problems I can ever imagine, but to imagine we're going to solve this at sort of the grass-roots, sort of one inch above the surface level is, I think, a naive belief. And I believe that there is now the political will to do this, but I think it's a matter of putting the process together that is consistent with that will.

Thank you.

MR. LEITNER: I thought that was a great summing-up, Marc, and I'm particularly delighted to know that what I've always called the leap frog effect is really phase boundaries.

[Laughter.]

MR. LEITNER: I ask you, Commissioner Newsome, what would you like us to do? Do we want five minutes for questions now or should we keep people from the cookies?

COMMISSIONER NEWSOME: No. We're going to go ahead and go into questions now.

MR. LEITNER: Okay, great.

Yes, sir, Mr. Johnson.

MR. JOHNSON: I'm not quite sure who to address this to on Mr. Leitner's panel. I used to call him "Tony," of course, but then there was the Goldman IPO and ever since then I've felt "Mr. Leitner" is more appropriate.

[Laughter.]

MR. JOHNSON: What I was hearing from the exchange representatives appeared to be an embracing, nearly a bear hug of technology up to but not beyond the point, the threshold for the actual trade execution.

Do you believe that that strategy is sustainable, and if so, why?

MR. LEITNER: I think that really is a question for the exchanges?

MR. DUGAN: All right. Back in '97, we launched an e-mini S&P contract, and what we did is we signaled to the world that we were going to launch side-by-side trading models. People didn't maybe perceive it as such at the time, but this year we launched e-mini Nasdaq, e-mini yen, e-mini ECU, and we'll launch other e-mini products.

Now, what does that really mean? That means that we're trying to offer to our customers their choice of both electronic or open outcry access for execution, in other words, and it's really their choice. And it's also embedded in a belief that the liquidity pools that are brought together by an open outcry market by competing local traders, by people who have a depth of professional access to other liquidity pools of complementary risk natures, can create better price performance, and, facilitated by our distribution strategies and our deck management technologies in our pits, can bring all in a more economically efficient fill to the end customer.

So it is all about customer interest, it is all about execution efficiency. And what I would tell you is that we're going to offer the customer the best of both and hope that that serves us all well.

MR. LEITNER: Dave, do you offer time priority to the orders that are submitted electronically and auto execution?

MR. DUGAN: All of our orders are received in and processed. If you're really speaking electronic trading, obviously all that is handled on a--

MR. LEITNER: Yes, I was.

MR. DUGAN: Yes. I mean, all that is handled on a FIFO basis or on an allocation basis, depending on the product. And then if you're speaking to open outcry, obviously we're taking it in on a FIFO allocation mechanism. So I think we're trying to be fair to every customer, to every constituent, regardless of whether they are coming from retail, proprietary, or institutional segments.

MR. LEITNER: John?

MR. ELEY: I think certainly our view is that it has to go all the way through. I think to have a trade be entered electronically, routed electronically and then spit out into a pit is simply not as efficient as having it run all the way through electronically, clear electronically, be checked for risk electronically, audited electronically, et cetera.

MR. LEITNER: I must say I've scratched my head myself, given the call for linkages over the options exchanges by Chairman Levitt, how that was going to be accomplished efficiently if exactly what John just said was going to be the pattern. Electronically linking--I don't know; there are great analogies. Somebody will come up with a metaphor. Maybe Jane has it in mind.

Did you have a question, Jane?

MS. CARLIN: Maybe more a comment than a question. You know, having sat through, I won't say too many, but more of these conversations that I've probably kept track of over the years, I continue to hear the wrong debate occurring, effectively.

I appreciate that these are competitive issues between organized exchanges, and newer ways of trading, whatever we're calling those. Having said that, it's not to say that one side or the other is using technology more effectively, better, worse. I don't really think that's the point. You all may be doing a great job, you may be doing a lousy job.

What I know is that buyers and sellers are stuck in the middle. They don't really care. They want to profit from all of the above. So I wish we would stop sort of talking about effectively the relationship between the new and the old. It's sort of who cares whether you like each other, you get along with each other, you think each other is doing a good job or a bad job. Let's get back to the customer point. And I feel like I'm sort of mirroring--I hope I'm mirroring what Mr. Downey said at the end of the first panel because we're still on the wrong point.

COMMISSIONER NEWSOME: Thank you, Jane.

Jim?

MR. HEINZ: I had a question regarding the traditional exchanges. Something that has been talked about today that is coming through to me that I agree with is that perfect market transparency begets volume and liquidity. Market depth is important, information is important.

How in the world can the traditional exchanges possibly compete with this current trend? What is their strategy? I, as a trader, don't want to get on the phone and hear somebody tell me what the market is. I want to look at my screen the way our traders in London and Chicago do and see what is there, a price that is actionable on. How do the exchanges expect to compete with this overwhelming trend that is occurring in the industry?

COMMISSIONER NEWSOME: Yvonne, a response to that?

MS. DOWNS: I think it's a question of exchanges offering variety. I think we're not saying that all of the customers want to just look at a screen and click a button. I think there's a lot of negotiated trade that goes on, and I don't think it's solely one size fits all.

And I think that, you know, by calling us exchanges because we're organized and we serviced many different constituents before, we're still in that same business. We're serving many different constituents today. And I know the technology adds a significant amount of help in a lot of parts of the process, but you still need all the players to come together to determine price. Some of them are price discovery, some aren't, but you need a variety, and I don't think it's one size fits all. We just want to be a player.

COMMISSIONER NEWSOME: I'll take one more question before we break.

Larry?

MR. MOLLNER: Not to continue to beg the question, but isn't the answer that the exchanges as they are presently structured are member organizations, and member organizations have member priority rather than customer priority?

MS. DOWNS: There's no question restructure is part of all of the process of how competitive environments are going to be handled in the future.

MR. WOLKOFF: You know, I'd have to answer that with no, because the members don't make any money without the paper. It's sort of a nasty metaphor for the customer, but, you know, if you don't really encourage the paper to come in the market, the members aren't exactly, you know, thrilling their families at Christmastime with a quality and quantity of gifts.

So I do think that, you know, to the extent that the exchanges have put themselves into a position of being able to, you know, satisfy those customers that want an electronic front end, once customers begin moving in that direction, to answer a whole bunch of these questions, I think the exchanges will be forced to move in that direction as well. I mean, there's no way, you know, to buck the trend.

And, you know, Jane, I think before I said that my problem with the end-to-end, the front-to-back processing was really that the whole debate seems to take some aspect of customer choice out of the mix and it looks at the question of not necessarily what is best or easiest for the customer, but what is best for the processor.

And I think that to the extent the customer has to voice an opinion that it wants its transparency in an electronic form--and you do make some assumptions suggesting that electronics gives you the best transparency for those people that will trade the biggest volume. So, you know, when you're down on the floor of an exchange or familiar with how the markets work, it does work that way in certain markets. It doesn't in others.

And one of the interesting aspects of this whole debate is that it's not very uniform so far and we don't have a lot of examples to draw on with universal truths. We haven't come up with our, you know, Newton with the apple hitting him in the head saying, ah-hah, I understand it. There's nobody who understands it.

And I think the answer to this has got to be a solid "I don't know" because until we start seeing some things that become more universals or more axioms--you know, to me it's not a question of industry cooperation. It's a question of customers making their needs and wants felt and known more consistently, more universally, and I think the marketplaces will respond to that.

I don't think it's a regulatory issue. I think it's a market issue, and I think that the role of the regulator has to be to oversee customer protection, but not necessarily to be out in front of what the market is telling the exchanges or the unorganized or the disorganized marketplaces what they want.

COMMISSIONER NEWSOME: Okay, thank you, Neil.

Tony, thank you for a very useful and entertaining group discussion, we will break for ten minutes.

[Recess.]

COMMISSIONER NEWSOME: Okay, let's go ahead and resume the discussion. I don't know about the rest of you, but just looking at the agenda, looking at emerging technologies, is something that's very exciting to me. We've got Hal Hinkle here to lead the third discussion group.

Hal, we'll turn it over to you.

MR. HINKLE: Thank you very much, Commissioner, and to each of the Commissioners and the Chairman, I think we're all grateful to be here to have our viewpoints both shared, exchanged amongst each other, and heard by you.

Our panel is the fun one; we get the fun topic, and we're going to try to take it a five-year outlook. Each of us will have some responsibility to try and look five years forward. We're going to deal with both the possible and just the plausible.

But before we do, I'd like to ask a question, and the Commissioners are exempt from identifying their position on this point. How many of you have ever held in your hand the little greeting cards that when you open them play "Happy Birthday" or some song of that sort? Have you ever held that in your hand?

[Hands were raised.]

MR. HINKLE: Okay, and how many of you at some point threw that away? You didn't keep it in your scrapbook, you didn't--

[Hands were raised.]

MR. HINKLE: Okay, good. When you threw that away, you threw away more computing power than existed in the entire world before 1950.

I'd like to take a quick step back to take a step forward and talk about the way I saw the business when I began because the acceleration of change is, I think, the key point that is going to come out of what we're going to address right now.

When I began, we had fixed commissions on the New York Stock Exchange--that was pre-big-bang--relative to exchanges. And information--I didn't have a Quotron when I began or a Telerade; it got added after I began. We used the morning quote sheets that came out via the telex. I read a

basis book to figure out the values of bonds, I really did. I still have mine; that's in my scrapbook.

And I was thrilled when Monroematic made the first calculator. We couldn't believe it when it got shipped to us; it was a miracle invention. Visicalc was just becoming commercialized, and if ever anything should receive a Pulitzer or a Nobel for something, it's basically analytical spread sheets. And we didn't have direct lines. We communicated with telex, phones, and even letters. We did transactions with letters from time to time.

Where we are today I think it's important to recognize because it's easy to beat upon the existing exchanges and say that they haven't adopted technology. If we look around, quite a few commenters are happy to say that the United States futures industry broadly speaking is the world's low-technology leader. I think that's maybe more of a gap between perception and reality.

And if we look at the early attempts to adopt technology in support of the full trading platform, we would have to count at least six serious efforts that either have gone on or are still going on that are easy just to rattle off, and I'll name them as Globex, Project A, CBB, fut.com, the Cantor Exchange and E-Pit, are all in that market right now for listed products.

When we recognize that there is the appetite, we come back to the problem is not the desire to adopt technology and use it, but it's the challenge to harness the technology to the end of the entire marketplace, to serve the entire marketplace.

I would like to give you an example that for me is a very tangible example of what happens when technology gets harnessed, and it's going to be a 20-year look and then we're going to turn it into a 5-year look. Approximately, in the last 20 years, 20, 25 years, the same as when I was talking about basis books and Monroematics, et cetera--in that same period of time, computing power has improved or increased approximately 16,000 percent.

The tangible example of that is to think of buying a Lexus. If automotive technology had kept the precisely the same pace, a 16,000 increase in the productivity or the contributed value of the resource, you would buy a Lexus today for $2. That Lexus would travel at 2 times the speed of sound, it would go approximately 1,000 miles on a thimble of gas.

That is what we have available to us. That kind of advancement in technology took 20 to 25 years. What we are about to see--leap-frog effect, phase change--what we are about to see is a collapsing or an acceleration of the use of technology for us in the markets that will, I believe, take place pretty quickly and pretty dramatically, completely within 5 years, which is my own view. So our panel is going to try to address the issues from the perspective of what will the world be like within five years.

It wouldn't be appropriate for us to look five years ahead and not drop a few buzz words for you, a few things to be thinking about. And I'm just going to throw a few new ones out because as we think ahead, ultimately our adoption of technology will be supported and sponsored by what is happening at MIT, at Cal Tech, in the silicon labs that exist today, okay?

The first is that what we know of as chip manufacturing, lithographic manufacturing, is probably going to be replaced by self-assembly manufacturing, a whole field called molecular electronics, or moltronics is the short term for it. Silicon chips will be replaced by what are considered carbon nanotubes. I can't even explain what they are, but I know some smart people that I talk to say you won't believe what they can do and will do electronically.

And what this gets down to is the increased miniaturization of our use of electronics. I think this affects us in the marketplace. We've gone from main frames to desktops. We will go from desktops to wearable computers. Dare I say we will go from wearable computers to at some point people will actually have apparatuses implanted in their body that will let them know what they want to know when they want to know it and where they want to know it. So I think that's all ahead of us.

Our topics today--we're going to divide the five-year outlook into three topics. Each of our panelists will take one of the three topics generally and address those three topics. The three topics are the execution and trading platforms, what will they be like in the five-year outlook; clearing and straight-through processing, again what will it be like five years out; and, finally, market structure and regulation.

Joe, Phil and Peter will address, broadly speaking, the first topic, Brett and Mike the second topic of clearing, and then Ken and Jack the third topic. As they do, they will make a brief introduction of themselves and the affiliation that they bring here today, and then they will make

somewhere between 3 and 4 or 5 minutes of comments on what they see 5 years out.

I'd like to start with Joe, if we can.

MR. DIAL: Thank you, Hal. Joe Dial. I'm the Business Development Director for E-Markets. E-Markets is the online market space for the food value chain. What E-Markets is doing presently and is working toward and will have accomplished in five years is providing e-commerce transactional platforms wherein the stakeholders within this value chain will be able at those points of exchanges to transact their business electronically and economically and efficiently.

And in addition to that, we presently have available e-business solutions for the stakeholders in every phase of the value chain, from the technology providers all the way to the consumers in this food value chain.

What we envision happening, just for example, is that one of the e-commerce platforms that we have now is being used in trading grain, and our customers are already asking us to provide them with real-time risk management execution after they initiate their cash grain trades. We can't do that, but we will be able to do that.

Our customers are also asking us about the possibility of providing exchange-traded derivatives for products that are unique in today's marketplace but will be commonplace in two to three years from now. Among those would be GMO types of products. Granted, they are controversial at the present time, but number two yellow corn doesn't cover all the different types of corn.

As the Commission continues to move along the track that they have indicated and are proving today by the very fact that they are having this roundtable discussion, namely, for instance, to make it possible for an electronic exchange to be established and for that electronic exchange to develop a contract that meets customer demands, then those types of exchanges, those types of virtual futures exchanges will evolve and will operate, and E-Markets will be one of the facilitators of that type of transition in the way the food value chain operates.

Someone made the comment a few moments ago about we need to move from adversarial relationships to alliances and to joint ventures. That is what we're talking about facilitating and making possible with the e-commerce platforms and the e-business solutions that we are in the

process of making available presently and developing for the future for the food value chain.

MR. HINKLE: Thank you.

Phil, will you offer your thoughts?

MR. TODD: My name is Phillip Todd. I'm with E-Pit, which is a San Francisco-based company that is developing exchange technology for the operation of exchange markets directly on the Internet. I think we have a little bit different perspective on some f the issues being discussed here today. I should add that I'm a former CBOT staffer. I worked there for about three years and spent about eight years trading in Japan's electronic markets. I met Steve Spence from Merrill Lynch there.

I'll try and be a little bit provocative because Hal asked us to be interesting. I want to make a projection about the way exchange services are delivered in five years. There's a new term being kicked around in Silicon Valley which is called ASP. It stands for Application Services Provider. What this means is that there are a lot of companies, including Sun Microsystems, Microsoft, Oracle, very well-respected, very large companies that are making plans right now to deliver heavy-duty application services directly over the Internet.

E-Pit is in the business of building exchange application services that can be delivered directly over the Internet. A number of major telecommunications companies such as Digital Island or HP or Exodus are now building large server facilities in North America, in Europe, and in Asia which will be able to host enterprise-level, high-performance, exchange-like markets from a central location.

And our project here at E-Pit is that this is going to be a very big market not just for conventional exchanges, but also the new business-to-business exchanges which are emerging all over the world. We're tracking literally hundreds of new business-to-business exchanges for trading anything from agricultural commodities to information-based commodities, and many of these people have ambitions to migrate their markets into being futures markets, and they are at the point where they are needing regulatory guidance.

They are needing clearing services, they are needing accounting services, a lot of the infrastructure that currently serves the regulated futures industry is in high demand, or will be in high demand in the very near future just across the border in the unregulated space. E-Pit is trying to build technology that is going to serve both

markets, the business-to-business exchanges, also private internalization markets that broker-dealers might be able to use to foster more transparent and more efficient market-making with their institutional clients, and so forth.

But the point I want to make is that there can be a common exchange infrastructure that spans all of these markets, and I think that there's a lot of new players out there looking for guidance and looking for infrastructure services from the current regulated futures industry.

MR. HINKLE: Thank you, Phil.

Peter, can we hear from you now?

MR. BORISH: A pleasure. My name is Peter Borish. I guess I'm a dinosaur, too. I guess I'm the only CTA represented around this table, so I guess before we think about going out five years, I'd like to sort of go back because it's interesting we're here at the end of the decade.

You know, at the end of each decade there has been some major top in a market over the last 40 years, you know, the late '60s high in the stock market and levels that have not been exceeded yet, the highs in 1980 in silver and gold and in crude oil, and, of course, the high on December 31, 1989, in the Nikkei.

So I think that for us to say where we're going to be five years from now is not only a function of technology, it's also a function of where the markets are in which we participate. And I will posit to say that we are not going to be where we are today. We're either going to be a lot higher or we're going to be a lot lower, but we're going to be somewhere, and that's going to have a major implication.

And I say that because to figure out where we're going five years forward, I think we need to step back five years and look at where we are in the futures industry to a certain extent is where the equity mutual fund was five years ago, in 1995. If you look back at the cover of magazines coming out of 1994, because it was a down year, the last down year in the equity market, the world was professional money managers, mutual funds is the way to go; index funds, that's where it is. The individual is not a necessary component of these markets.

We look forward five years forward. Technology, cost of doing business, intellectual capital has been widely dispersed among individuals. In fact, fees have been driven down because the monopoly that we had on technology and

intellectual ownership has been driven down. So the individuals have started to trade and there's an entire new industry that was developed off of the growth of the technology.

I posit that in five years from now, if, you know, we're not at 36,000 in the Dow but there are other things, inflation up-ticks or market move, crude oil rallies, gold actually has a rally for more than a day or two, the individual with the technology and with the understanding will start moving toward trading these particular markets as individuals as they did in the equity market. And I think that that is a major, major growth area in this entire industry, and I think that that is going to have to deal with regulation.

If I'm an individual and I want to execute through one of these new firms, E Trade, Ameritrade, or a major trade, how does that deal with the Series 3, Series 31, the other components of regulation? If I want to trade U.S. bonds and bunds in a spread, how does that deal with cross-margining and the currency implications with that?

So five years from now, I think that individuals who have had a taste of success of managing their own money--and I think the one that has been certain over the last 30 years is that almost single governmental action in terms of regulatory change has put the onus of individuals' management of their assets onto the individual, away from the government, away from the corporation, right from defined benefit plans, and so forth.

That means more individuals are going to have to be aware of this. So if there starts to be any kind of deterioration in their assets because there's an up-tick in inflation, which isn't entirely bad if more people are working and incomes are growing, and so on and so forth--I'm in the labor force and I always get a kick out of when these numbers come out and they say, well, you know, wages aren't going up. I'm not sure, you know, that's such a good thing, unless I actually have the right position on them.

So I think that five years from now, there's a lot to be said. All this comes together in one defining word, which is risk. One thing we know for certain is if you bet against records being broken, you go bankrupt, and if you bet on records being broken, you go bankrupt because timing is everything.

Thanks.

MR. HINKLE: Thank you very much, Peter.

The second topic that we want to take a five-year look on is clearing and straight-through processing and settlement systems.

Brett, can we start with you?

MR. PAULSON: Sure. My name is Brett Paulson. I'm the Chief Information Officer at the Board of Trade Clearing Corporation. Looking five years out, I really wrote down three things that I think we can count on going five years out.

I think there will be fewer clearinghouses and more cooperation between those clearinghouses. Number two, the clearinghouses will be clearing a variety of products, driven by members of multiple exchanges. And, three, the clearinghouses may provide one-stop shopping in the future as the trade capture systems expand.

As a CIO, I kind of concentrate on two things at the Clearing Corp, maintaining the financial integrity of the contracts traded through the markets that BOTC clears, and to provide accurate, reliable, cost-effective, and timely information to our clearing members. To be a player going forward, we are currently preparing our technology to clear numerous exchanges which are commercially sound.

At the Board of Trade, we clear about 2.1 million contracts a day. In the past, we have cleared for the New York Cotton Exchange. Our systems take trades in from our own trade entry vehicle, member firms' back office systems automatically, and through electronic trading systems--Project A, and in the future EUREX. We also take in trades from hand-helds in the pit as well.

We generate hundreds of various reports for the clearing firms, and this is really where we see some of our value-added in terms of adopting Internet technology. We currently provide the reports through the main frame, through paper-based systems, as well as, as of this month all reports are available through our Internet site.

We are architecting our systems to provide real-time matching and real-time positions. In an open outcry environment, obviously, we're somewhat dependent on how quickly those trades are submitted to us, but certainly this is not an issue in the electronic trading market.

We're also going to concentrate on common protocols for the back office. We've developed a common electronic trading interface that we would like to standardize on for all electronic systems that we work on. And we've just finished

a give-up API receive/send automated interface. Lastly, we've enhanced our customer network so that we can expand the pipe that we send to our present clearing members and firms, and we're hoping to provide more robust applications in the future.

Thank you.

MR. HINKLE: Brett, thank you.

Mike?

MR. SCHAEFER: I'm Mike Schaefer and among my duties at Salomon Smith Barney is order execution facilities globally and clearing operations. And one of the benefits of coming on third is that I get to listen to everybody who spoke before me, tear up my notes at the break, and come back and say something else. But actually it is kind of very reassuring to look around the table and see the look of bewilderment on everybody else's face, as I am from time to time.

I don't know where we're going to be in five years either. I'm in the customer business, but I'm careful not to use that in any monolithic sense. My customers are quite diverse. They are, of course, the retail speculator, they are the commodity funds and trading advisers, they are the institutional users. They are also my capital markets groups in the broker-dealer and at the bank. They include my back office folks and the back office folks at my customers. They include people like the Global Custody Division at Citibank.

So it's really quite a diverse constituency, and the response of where we're going to be in five years on a technology basis is really as variable as their response, their business plans, and their response to technology.

For instance, I used to think that a global order routing system was the answer to whatever the issue was at the time that I thought that that was a good idea. But as I go around to customers, customers have their own ideas. We have a proprietary system, for instance, in-house that we call World Trader. It trades on the equity side.

How do customers access World Trader? Well, we can give them a terminal, we can give them software access, we can give them Web access. But they don't want that. They want to be able to talk to us through Bloomberg or they want to be able to talk to us through some other facility that already exists on the cash trader's desk. So we're looking for an answer that will allow those customers who want to talk to us from some other vendor or means or access point to bypass

the front end altogether and get right into the routing engine.

So those kinds of responses to the variable demands of the clients are going to be quite numerous. I don't think there will be a single solution. Whether it's a vendor solution or an in-house build or some combination of the above, I think that each year--somebody quoted Moore's law before and I think that that is certainly true. Each year brings a new challenge and a new technological demand.

I also wanted to just comment on the discussion of whether this is a tidal wave coming. I think that if there's an analogy, it's kind of like we're at the end of the global warming trend in technology. This is a move that has been going on obviously now for some period of time, and there have been great temperature inversions in London and in Germany and in Paris. And there's a glacier melting along the Hudson with counterfeits, and there's another glacier about to break off the North Atlantic shelf with BrokerTec.

I think that the waters are rising, that the response of the regulators, not just the CFTC but the self-regulators, the exchanges, the SEC, the Nasdaq, the NASD and other regulators in meeting the challenges of these technological changes in the immediate future--I don't mean to imply that we have time; I don't think we have time. I think that the threat of competition from foreign markets is real. I think that we don't have much time to make a cogent response to those kinds of threats, and I think we need some cooperation among the regulators to achieve an adequate response to that.

MR. HINKLE: Mike, thank you.

The last topic for us is market structure and the regulatory environment, and can we start with you, Jack?

MR. GAINE: Sure. Hi, good afternoon. I'm Jack Gaine, President of the Managed Funds Association. AS a matter of disclosure, I should say that in the initial draft for this roundtable, I was drafted to play on team 4, under Captain Johnson. But unfortunately they had four New York lawyers, so their salary cap was exhausted.

[Laughter.]

MR. GAINE: They were unable to keep me, so they traded me and I'm much happier over here on the non-lawyer side with Captain Hinkle.

[Laughter.]

MR. GAINE: Where are we in five years from a regulatory and market vantage point? Do the Democrats take the House next year? There are a lot of, I think, issues here before one could even address seriously or meaningfully that question. So don't be specific or hold me to anything, and let me step back.

I worked for this Commission starting in August of 1977, and from that date to the present its demise was 6 to 18 months down the road. I think the risk of that might be a little higher today, but I think it's not going to occur. I think five years from now there will be a Commodity Futures Trading Commission which will continue doing a fine job, not as well as they did back in the late '70s. But, you know, the personnel changed and everything.

The market structure, I think, is going--and having read recently the President's Working Group report, the recent one, I think we're going to go to a two-tiered marketplace. The Peter Borishes will have significant institutional money and high-net-worth individual money. Other funds will have significant money.

There will be markets developed, there will be rules developed that will permit the efficient assembling of this capital within the United States, and the trading of it in an efficient way. And that's going to take a two-tiered marketplace. This Commission has committed to a review of the rule book, and I couldn't suggest that there's a more immediate, pressing need right now because it can be done today in-house. And I would hope that we could get forward with some of that.

Of course, I'm taking a little ad out for the managed funds business, but there doesn't seem to be any prohibition against that here. And I see what everyone is talking about here, bits and pieces. I mean, I'm a lawyer in Washington. I know about as much about filling out a trading card--I know a little about it, except I hear Paul Kimball talking about EBS and maybe a democratization of EBS.

I think certainly there are going to be developments like that for the managed funds industry and others. I'm not sure what a single platform is, but I'm for it. And I think there will be one, and you can trade all around the world. And it's not going to be a question of historical accident or what committee in Congress had you or didn't have you.

And I think our regulators, with the one exception perhaps on reporting by hedge funds, capture this concept

and are willing to work together. And they should be working together because, as the point was made here, foreign competition is always there. Big funds can move off here. The U.S. is not the only place with money. The talent can move offshore.

I know the mutual fund industry complained recently that it's unfair to have incentive fees in hedge funds because all the good traders go there. Well, this is the land of the free and the home of the brave. That's the kind of thing we do.

I don't have any great insight. I think we're going to have our exchanges. I think the corner of LaSalle and Jackson will have the same landlord it has today. There might be different kinds of activities going on, but the Chicago and New York Exchanges will be survivors on this. They are tough competitors. They are going, I'm certain, be demutualized. If that means privately owned, they will be competitive and they will be for-profit.

I don't think we're going to be looking at open outcry as we've come to know and love it, but there will be more efficient trades and executions for funds and customers. And there might be a lesser role for some intermediaries, and I think it will be an interesting five years.

MR. HINKLE: Thank you very much, Jack.

Ken, that leaves you to bat clean-up for us.

MR. HAASE: Gee, thanks, I appreciate that. I'm Ken Haase. I've Vice President of Information Systems with the National Futures Association.

At least talking about five years out is in a way kind of lucky for me. One of the things we just wrapped up earlier this year was a long-range planning session, at which time we took a look at this industry and said where is it going to be in five years and what does NFA have to do to position itself to best serve its customers. And looking around this table, that's basically all of you, and that is how we viewed it.

There were 12 senior staff members who worked on this for quite a time. We interviewed over 40 people in the industry, and then met with our members to kind of talk about it and look at different scenarios. One of the things that has been talked about today is screen-based trading. Yes, we see screen-based trading coming on, being the predominant form of trading. But there was no complete

agreement that open outcry was going away at the end of five years. It definitely seemed to be that there would be both.

Some of the things Jack just said about mutualization of the exchanges--yes, that was talked about, agreed upon. We also, as far as ads for places, saw that as these exchanges become for-profit, we see a lot of the SRO responsibilities that they do now probably heading over to NFA, something we feel we're prepared to take on and do a good job in.

To say exactly what some of the systems are going to be in five years, let me just mention something that has been mentioned, I think, twice so far today, Moore's law, talking about the capacity of technology to double. And originally when Gordon Moore said this in 1976, he was talking about it every 18 months. And that has been kind of refined now to the technology capacity doubling down to around 15 months, some say 12 months.

Well, if you look out 5 years, using those numbers, you're talking about capacity increases of 1,600 percent of everything you have today as far as your processor, as far as your storage, as far as your networks, as far as everything. Your capacities are going to double if you're using the shortened version. So what is it going to be in five years? I don't know, I don't. I wish I did.

I wanted to talk about one other area in this corner, and this has to do with technology and rules. NFA and Commission staff have worked together to really try and set performance standards on the rules, not to try to define the technology or mandate any type of specific requirements. Let me give you just a little reason or corner behind this.

One of the things we're all working with now is e-commerce. And, you know, we're letting a number of people into our systems, onto our networks, and one of the most important things for us right now is authentication of who is this coming into our system. In the past, we looked at passwords and PINs. Today, Congress is working on a digital signature rule which will probably include the PKI, which is a public key infrastructure.

You can also use technology today, if you will, to pick up fingerprint I.D. at the PC. And probably in the near future you're going to see voice recognition and identification as a means of identification. So to go and try and pick a technology and say, gee, that's the best one to use, this is the tool we want you to use in that area, we don't feel is really the best way to do things. You want to set those standards, and as you get a chance to use various tools, you wind up picking the best tool for the job.

That's about it. Thanks.

MR. HINKLE: Thank you. I don't know if you recognized it, but I intentionally did not offer my viewpoints. I wanted to hear the rest of the panelists and then see what gaps I thought could be filled in, and two occur to me.

The first is that, picking up primarily from Ken's point, but I think also previously from Mike's point, natural speech recognition, thinking of the customers--customers today have gone from making a phone call where they speak to doing some kind of hand entry if they have an electronic front end. I think natural speech recognition will become an important factor for us. That, of all the technologies, just has not developed that fast. We played with some when I was at Goldman Sachs and I've certainly seen some since. It is not moving that fast, though when it comes on, finally comes on, it will be highly sophisticated.

The second point--I think maybe this is the most germane point--I think of all the topics discussed today, I haven't heard one party mention highly-automated pricing engines that are going to create prices either as a market-maker or as a proprietary trader. And when we think about the advent of technology, I think perhaps one of the most powerful influences will be the effect of automated, we call them pricing engines.

I was involved at Goldman Sachs; I was involved in developing what they did on the debt side. And at BrokerTec, I watch what each of our shareholders are doing to develop automated pricing engines that cover the debt and the futures markets. When I think about those and we think about the millisecond, nanosecond, the fraction of seconds that machines are doing their calculations in and sending them into pricing matching engines, then coming back--when we think about that, I ask myself the question where is the human element.

And when I think about being a regulator in that environment, I don't know exactly--I think it is a phase shift--I don't know exactly how do you regulate what is happening inside fractions of seconds, when primarily your focus on regulation is to think about the customer and historically it has been the individual consumer of the exchange. It's a very, very, very different mind set.

And I am reminded--to me, it's actually a little bit fearful. I'm reminded of the comment about what will the factory of the future look like. It will have two employees, a man and a dog. The man's job will be to feed the dog. The

dog's job will be to keep the man from touching the machinery.

Thank you, Commissioner Newsome.

COMMISSIONER NEWSOME: Okay, thank you, Hal.

Any questions for this group?

Phil?

MR. JOHNSON: I've always viewed an exchange as really having two functions. One is to execute a trade and the second is to clear it. I can envisage execution taking place on an electronic platform through open outcry. I can envision it taking place on a member-run organization or a demutualized organization, but I find it extremely difficult to envision what the clearing system of the future will look like in a demutualized, for-profit electronic environment because, as Brett knows well, it is usually member capital that supports the clearing system.

Does anyone have a thought on what the next generation of clearing systems will look like.

MR. HINKLE: I'll take one shot at it, and I think I'm going to just merge together comments made by two of our panelists and one from before. I think what we have now are individual clearing corps, thinking of the large ones, primarily serving a single exchange. I think they will serve multiple exchanges in the future. They will serve multiple products, and they will be products that are both exchange-traded and non-exchange-traded.

I think one of the curiosities that we didn't address when we talked about it before is if you have--this is frankly speaking--you have listed and unlisted derivatives trading on the same platform, and that is certainly a goal of most of the participants here for technology purposes, will they be cleared potentially in the either the same or in sister organizations?

There's obviously the efforts of cross-margining which is driving that direction, not a BrokerTec comment, but a personal comment. I have to believe that the economics of the industry and the desire to have optimal and efficient risk reduction systematically, globally, now that most of the major participants are global themselves--we will have a consolidation of the clearing operation which will be both global and multi-product over time.

MR. JOHNSON: I guess my question is where is the money coming from?

MR. LEITNER: Can I express a view on that?

MR. HINKLE: Sure.

MR. LEITNER: My own personal view is that in five years trades will be free. There probably won't be any commissions, and the question will be what is the role of intermediation and how do you add value and what do you do. And I think that the question of market intermediation--I also think it's absolutely true that liquidity will be provided, among other things, not only by natural supply and demand, but like the company we bought that makes, you know, simultaneous markets in, I don't know, a couple thousand options on EUREX everyday. And it's a machine, you know, and five people, and they respond and they're making money.

Somebody else clears for them. They are doing that with very little capital, very efficient, so that I think that, you know, firms with the wherewithal to provide financial intermediation are going to charge for that and they will be the parties providing liquidity into the clearing system. And the pressure will be on to efficiently measure the risk in the system, to charge for that, and that's why cross-margining and common clearing of product is going to be seen as a necessity not only for systemic risk issues but to keep the costs down and to be evermore efficient.

Probably, banks and larger firms will support and require very sophisticated credit monitoring. Another thing that technology can add to is the constant monitoring of assets and of the amount of leverage that is being injected in the system for various market participants. And that role may shift, you know, to effectively a new business.

MR. HINKLE: I'm going to try to answer your question very directly. I think it will come through mergers and restructuring. Ultimately, the amount of capital necessary to support the clearing activities around the globe for the capital markets is not as great when all of the risk is put into one common pool as it is now currently divided across there. More specific I wouldn't want to be on that at the moment.

MR. KIMBALL: Could I just make a comment from down here? I would just like to second those comments. As we look at our clients, our clients get more and more global in terms of their needs for the over-the-counter and the listed markets. And once the demutualization process catches fire,

I think it's going to become irresistible for exchanges here to merge with exchanges particularly in Europe.

And so one challenge you all are going to have to have is how you're going to coordinate your regulation with other regulators around the world because you're just going to be able to free up so much capital and you're going to be able to collect the liquidity. If you can collect it in one place, the liquidity will be better, the pricing will be better, the clients will win, and that irresistibility will occur.

So I think the next big phase in the next five years is that we're going to get a more efficient platform and it's going to be a more singular platform. But what path that will take I have no clue, but I think that's going to have tremendous implications for you all down the middle of the table here in terms of who you're actually going to be working with.

MR. DUGAN: Can I add to that? What Paul is talking about is the nature of consolidating financial services markets. And it's not just in the derivatives market space; it's going to happen across derivatives, equities, insurance, banking, brokerage, you name it. So I think that I was hoping to hear about the vision of the future of technology and the future of our business was how we were going to see consolidation of both the regulatory frameworks, the risk management frameworks, the execution front-end frameworks, and the execution and clearing and banking and settlement back ends altogether in one global financial marketplace.

And I think what we've got is technology costs are declining, all else equal, that are bringing, you know, Wall Street to Main Street, to everybody out there. And it's also a dramatic explosion in wireless networks. There's going to be an explosion in the fact that everyone will have Internet access to our markets, and they will be going around in their cars in the future and be trading everything that is under the sun as a retail consumer. I think that's the future for us and I'd like to hear some comments on that.

MR. TODD: While I think it's likely that there will be more consolidation in the financial services industry, and the commodity futures industry as well, I think there's a strong case to be made that the exchange of the future may not be a giant, monolithic organization that is trading all kinds of products and serving all kinds of customers, but instead will be a loose collection of what I call micro markets where individual entrepreneurs can acquire exchange and matching technology cheaply, and acquire clearing

services for a fee, and acquire regulatory services and compliance and oversight services, and so forth, for a fee.

We see exchanges as communities where people who have deep product knowledge, who have communities that are trying to serve want to come together and serve those customers by providing a facility for them to trade on. Well, if the cost of entry into providing those kinds of services is going down, as I think everyone agrees the Internet is likely to continue to move forward, it seems to me that there's a good case to be made that there will be lots and lots of small markets run by individual entrepreneurs who are inventive and creating new products and building new kinds of online communities that they are trying to serve. And all of these kinds of markets are potential customers for the infrastructure providers for the current industry, including the clearing corporations.

COMMISSIONER NEWSOME: One more question.

MR. GERSTEIN: Just a comment because I think predicting over five years is a difficult thing to do. At one level, it's sort of too long to project linear trends, and on another level it's too short to look at things that are really fundamentally different.

Let me just suggest that people think about some of the other big changes that have occurred in our lifetime as a way of thinking about how this might evolve. Arguably, one of the biggest technological innovations in the last 100 years has been the automobile, and when you look at what the automobile's biggest impact has on life and economics, what you realize is it's the creation of the suburbs, and that there was far more money made--if you wanted to know how do you make money out of the automobile, the answer is buy farmland outside of cities.

And if you look at how much money was made in real estate versus in the automobile industry per se, what you see is real estate dwarfs automobiles by several orders of magnitude. I believe we're being too short-sighted in imagining the future because we're thinking about putting up gas stations and we're not thinking about investing in real estate.

And there are other examples even closer to home in financial services that we could use, but let me stay outside of stepping on anybody else's turf and mention just one other example. You know, I think Hal eloquently talked about the various things that technology will do. But on a more prosaic basis, you can ask yourself what has happened to the lowly home stereo in our lifetimes. The answer is not

very much, other than the invention of the CD, which was just an exchange of one format for another.

But that is in the process of changing with, you know, a very well-promoted controversy now in the music world about something called MP-3, which is the marriage of computing and compression technology which allows people to download music from the Internet and put it on little Walkman-like devices that are all digital.

Now, what's the big deal about it? Well, the answer is it threatens the conventional business model that has dominated the music industry for the last 50 years. And, of course, the vested interests are naturally lining up to protect themselves, and the innovators are lined up on the other side. If you listen to those meetings, it sounds exactly like a global search and replace of the exchanges versus the technologists in this room, exactly the same arguments.

What I think we have to do if we want to think about the future is to think about some analogs, and also think about the big changes like the automobile and real estate because the opportunities for creating a really different future are here. I don't think we can plan them down to the fine details. I think that is beyond the possibility.

But I think we've got to open our minds from the narrow limitations of the existing businesses, as some of the innovators in this room have already done. Our friends at Island, I think, are a very good example of someone that has basically done something that was never done before. And Hal and others are trying to do the same thing in fixed-income. This will redo the landscape, and I think landscape-level redrawing is what is happening here. So when we think about the five-year vision, I for one am for investing in real estate.

COMMISSIONER NEWSOME: Thank you. Hal, thank you for a very enlightening discussion from your group. We look forward to hearing more in the future. But as we take many of the things that have been said from all three of the groups and then we look for someone to help us determine an appropriate regulatory response, I can think of no one more qualified than Phil Johnson.

So, Phil, we'll turn it over to your group.

MR. JOHNSON: Thank you, Commissioner Newsome. The Commodity Exchange Act, which is that pesky statute that we all have to live with, has been wrapping itself for 77 years around a brick-and-mortar, open outcry market model,

unfortunately. It is basically built on three pillars, the first of which is the assumption that the customer is heavily dependent upon intermediaries to complete transactions, dependent upon them in connection with order flow, as a result of which anywhere along a chain of movement of orders which could go through the hands of four or five or six strangers something could go wrong by way of mistake, or worse.

As a consequence, we do pre-vet most of the people on that chain, and we do through the registration process, and we expect of them best fiduciary practices. Now, the assumption is there is dependency with those people from the standpoint of cash flow, of money flow. And because of that, we go to lengths to protect the customer's funds through the segregation program and by requiring net capital by the firms with whom we entrust those funds.

A third form of reliance tends to be on information. Now, as a consequence, we spend a good deal of time on the regulatory side worrying about adequate disclosure of risks and other important information in the markets and trying to discourage people from stretching the truth in connection with solicitations and the like.

The second pilar is that the market is owned and controlled by users. And because of that, quite evidently there is a concern about potential conflicts of interest between members and end users and customers both in the trading environment and upstairs in the board room. So we pay a lot of attention to customer priority rules. We dabble a bit in the composition of the boards of the various exchanges, and we expect the exchanges, if there is a dispute between a member and a customer, to have an arbitration or some other dispute resolution mechanism available.

The third pilar is that by reason of the second pilar, we have the luxury of a pool of human resources that can be put to very positive purposes, such as a self-regulatory program and funding a clearinghouse, getting back to a point we just finished discussing.

Now, let's look at the potential structure of the new market. It is a for-profit, general business corporation owned by thousands, potentially, of remote public investors, and operated by people who for all intents and purposes and in all likelihood don't use the markets at all.

Under these circumstances, people fairness ceases to be a major concern. System fairness becomes a major concern. Conflicts of interests fortunately are reduced to a minimum in this kind of an environment. Unfortunately, the pool of

human resources that we always relied on so much and the source of funds to support the capital for a clearinghouse both disappear.

Users of the markets will be linked to the market contractually, so that the market's only effective remedy in terms of misuse of the system is to invoke traditional contractual remedies like termination of their access to the system. The term "self-regulation" doesn't even literally mean anything anymore because the owners of the system are probably not its users. And so the question becomes what do we do in the way of a self-regulatory program.

And Ken, of course, has hit it on the head. We do have the good fortune in this business of having a freestanding self-regulatory organization to which whatever we wish to define eventually as a self-regulatory function can be transferred. It's clear to me that the end users, who will be as scattered and as unaffiliated as will be the stockholders, are not going to organize themselves for self-regulatory purposes as a physically impossible task.

The role of intermediaries will change, obviously. Floor brokers and floor traders who were the focus of so much of our attention over the last decade will simply disappear. It's doubtful that the role of other intermediaries will be as important in the future as it is now. We have an $80 trillion swap market that's almost not brokered at all.

We know that 80 percent of the futures business is institutional; maybe higher than that, Steve, I'm not sure. But these are the same firms who have managed to get their swap business done without necessarily using any sort of a middleman. It's good news in the sense of reducing the risk that agents can pose from time to time. It's bad news in another sense. If end users can contact each other directly without the use of intermediaries, there's a potential not presently prevalent of having end users defrauding end users. Interestingly enough, our statute on the futures side does not make that an offense under federal law because it's not conceivable that that could ever happen.

We'll have to think about new ways of dealing with credit risk because of the fact that there is no longer the convenient pool of clearing members. I'm old enough to remember the old International Commodity Clearinghouse, which was a consortium of six London banks, and I was wondering if anyone on the panel might suggest that maybe the banks will find a new business opportunity here. But somebody is going to have to step in and take some responsibility for that. As I mentioned, the self-regulatory

side of the business is going to have to be let, have to be subcontracted to somebody.

A while back, I made a good-faith, although utterly unscientific effort to go through the statute and to find out what provisions in there no longer work, or at least don't work well. I was hoping to reach the conclusion that with a little tinker here and a little tinker there, everything is going to be fine. But unfortunately I found that better than half the Act, by my measurement, doesn't work in an electronic trading environment.

I'm going to start with Mr. Heinz over here when I complete these remarks and try to get some views on this subject, and come back across this way. But I've reached the conclusion that what is needed is going to have to be--let me preface that with a point. I have found that the Commission staff is more than willing to consider using its exemptive authority to help bridge some of these hurdles. I think there are thousands of hurdles, and as a consequence I'm a little pessimistic as to the practicality of getting there under the most enthusiastic set of circumstances.

So my thought is to create within the Commodity Exchange Act itself--and after all we are in reauthorization--some means of capturing the new electronic trading environment independently of the old model, not attempting to move one into the other, but doing it independently of the other in a manner that would not only cover the new systems that are being developed independently, but also cover Globex and Project A and Access and the other electronic trading systems that the exchanges have when and as they go through the structural changes we've been discussing.

So what I'd like to do now is to ask Jim Heinz if he would comment. And then, Larry, we'll come around, and Ken, and do it that way.

MR. HEINZ: Thank you, Phil. Let me make something clear from the get-go. I am not one of the four New York lawyers, but I think I can bring to the table something a little bit better. Marquette Partners is a proprietary trading firm, privately held. We have offices in Chicago and London, and we are very active on all the electronic derivatives exchanges worldwide, to the extent of approximately 15 million contracts a year, which for a firm of our size, I think, says a number of things.

And one of the things I'd like to say is that market transparency--before I came, I had a conference call with all our traders and I said, what do you think I should say

when I appear before the CFTC. And they said, tell us, what does the CFTC do for us? And I said what would you want them to do? And they said, well, there's a number of things, one of which is transparency.

And I think today we discussed transparency and how important it is to liquidity, market depth, level the playing field. And it begets volume, it really does. So I think transparency is very important, and I think if the Commission could do anything, it's to insist that that would be part of any kind of new rules.

Liquidity, of course, is very important, too, and that comes on the back of market depth, pure information. Without it, you create an information elite that has disingenuous order routing to benefit the proprietary traders in-house. I don't think that's fair. Our traders don't think that's fair.

And I think there's something else to be considered, uniformity of error resolution on some of these networks. There are errors, and there are a number of different methods to resolve those errors. Something else the Commission could do: create, with cooperation with other global entities, a way that you could resolve error resolution.

I think there is one thing else, and that is somehow you have to stress-test regulated electronic markets. There are some electronic markets out there currently that are posing a financial risk to end users like ourselves, and perhaps a systemic risk to other users, even the network. That has to be addressed. The broadcasted price that they have has to be actionable. They can't be something that is seen yesterday. There has to be some standards by which the Commission feels that if it's below these standards, then they are taken offline.

I've talked about transparency. Block trading. Certain markets--block-trading, I think, might be important, might be helpful, but there should be a minimum because I think in the new world, in the new reality, information is everything. Everybody should have equal access to information, nothing less. And to have some firms that have it and use it to their benefit at my detriment, I don't think that's fair.

That's about all I have to say right now.

MR. JOHNSON: Larry?

MR. MOLLNER: Okay, thank you. As I jotted down my notes, it kind of comes out this way. E-trading, we've heard about, matching systems, automated order entry, routing systems, customer Internet access, automated clearing, straight-through processing, all of which are changing very rapidly.

The CFTC is also changing as it takes on an oversight, hopefully, regulatory stance, and possibly new regulatory formats after the President's Working Group and new legislation. Technological change and the ability of the regulation to remain not only current, but ahead of the curve, has got to be questioned and has been questioned.

Therefore, my recommendation is for well-publicized guidelines and/or best practices to be used as the standard for oversight, allowing for ease of entry, customer choice, and competition. They will cover fairness, reliability, liability, and security.

Exchanges and FCMs as we know them may be a thing of the past in a few years. I envision this intermediation making for-profit exchanges and FCMs very much competitors of each other. Current rules, recordkeeping, reporting, internal controls of systems and operations are all in place. Because orders go from point A to point B differently does not call for additional rules.

In reality, electronic order routing and matching aids in the audit trail, the transparency, and customer service, as we have so often heard today. In the past, the CFTC has used the ability to get additional information as a means of collecting it. The dollar cost analysis, and with the competitive nature of the markets, that proved to be a burden to the U.S. electronic markets.

To make it easy, don't reinvent the wheel. A simple suggestion: adopt the IOSCO principles for the oversight of screen-based trading systems for derivative products. The work has already been done. Oversight regulation provides a level playing field. It does not and should not provide for equal quality of teams.

Thank you.

MR. RAISLER: Thanks, Phil. I'm Ken Raisler, with Sullivan and Cromwell. A lot of significant developments have come on this afternoon in terms of this roundtable, Commissioner Newsome. I would point out one that probably is virtually unprecedented, and that is that you have four New York lawyers who actually haven't said anything for over

three hours. So we'll try to use the remaining time to do whatever catch-up we can.

Let me talk what I would say sort of practically about the role of the CFTC going forward, and I see that role in two areas, one fairly obvious, one perhaps a little less obvious. The first is an area of regulation. I don't have a clear conclusion as to whether or not we're talking about Phillip's idea of small markets or Paul's idea of one market, but it's clear to me that the CFTC has to not play favorites.

I think the Chairman has said not to pick winners in this battle and basically knock down the barriers of entry. When I look at the regulatory structure, I see sort of three tiers of regulation for the CFTC. The first--and I'm really in all cases talking about a technological environment because I don't think it's really relevant, at least from my perspective, to talk about the old model.

But assuming we're talking about a technological platform for trading, the first model would be somewhat of a more traditional full-service exchange which involves, among others, the retail community. And if you take either Doug Dugan's or Peter Borish's view of the growth of retail, that's not an unimportant part of the business of the CFTC going forward, although I think that an awful lot of what the CFTC can do, following Phil's examination of the Act and what the staff is doing to knock out an awful lot of what is there--I think we have to look at audit trail and we have to look at the system integrity, the stress-test concept that Jim referred to a little bit earlier.

I think that there's a lot less there than meets the eye, but there is still a very important role for the CFTC. But the key point is there has to be an ease of entry for new participants in these markets because these markets can be designed a lot cheaper than they were at an earlier time, and we can't wait the year or year-plus to get reviewed and approved by CFTC in order to get up in the market because if that is the time line, then people will find another way to do the business.

The second tier would be a market that is still an intermediated market but involves only the institutional client base. And it's not clear to me what exactly the CFTC's role there is, whether it follows more of the retail model light or whether it sort of steps away and stands back entirely. This was at one point sort of the Part 36 idea in its incubation and its non-birth.

I think that there's more that can be done there to examine exactly what role the CFTC needs to play. I still

think there are important roles with respect specifically to clearing activities and to the role of the market itself, but I'm not so sure that the heavy regulation of the intermediary is nearly as important in that environment and that is what needs to be examined.

The third area is really the area where the President's Working Group addressed the role of a dealer market, the institutional and dealer market, and there the possibility of the CFTC stepping away entirely. These proprietary systems are growing up and there definitely is not a clear role or need for the CFTC. But I would like to hold out the possibility that for those people who decide that they want to be blessed by the CFTC either because they are trying to market globally and find that is a useful way to enter foreign markets or they want to deal with certain kinds of fiduciaries directly or indirectly, to have a way in which there could be a blessing here at the CFTC of some type to recognize the validity of their operations and thereby allow them to passport around the world. That's my paradigm for regulation.

I think the other category where the CFTC has to play a role--and it really summarizes a lot of comments around the table this afternoon--is I think if the CFTC moves from a hands-on regulator to an oversight regulator, it has to basically take on the bully pulpit of using the jawboning technique in the public environment to advocate progress for this industry.

And here I have sort of four examples. They are all basically examples that came out of the discussion this afternoon, but they are all, I think, very important. The CFTC needs to encourage--generally, the overview here is one of cooperation--the CFTC is going to have to encourage cooperation with other regulators in the United States and those that are cross-border because there will be a substantial consolidation that needs to be facilitated.

But more specifically, the CFTC has to use that jawbone to encourage the common platform idea that Tony and his panel talked about at great length. Certainly, the notion of SEC-CFTC products being offered on the same screen through different windows is not just a long-term, five-year prospect, but a very immediate one and is certainly what is happening outside the United States.

The second area is to jawbone in the area of clearinghouses. We need a clearinghouse evolution toward a utility, and I accept the points that were made that we're looking at--and I think Brett made the point about sort of moving toward fewer clearinghouses, cross-margining, encouraging the margining of not just futures products but a

whole range of products, and realizing that to serve the customer and to serve and reduce systemic risk, there's an awful lot that can be achieved there. It's not something the CFTC can force, but I certainly think the CFTC can facilitate and encourage.

The third category for me is the area of best practices, some of the things that Larry talked about. I think the FII-NFA project to look at best practices for the electronic systems--I think the exchanges today need to be encouraged to cooperate. There are a number of vendors who re trying to vend into all of the exchanges. It's a hodge-podge system currently, and if there's going to be efficiency in the market, the CFTC can certainly encourage it.

And I think that best practices standards to avoid the kind of problems that Jim hypothesized may be involved in people trading in markets that may not have the system integrity or the levels of systems integrity that they should have. Order entry, execution, give-up--these are all areas where best practices can make big strides.

And the last area, I think, is the area of transparency with respect to data, with respect to information. There again, I think the CFTC historically has not played a regulatory role. I don't encourage them to play a regulatory role, but I think they can play a profound role by stepping up and making statements. And I think that the platform here at the CFTC, as indicated by the kind and quality of people around the table here today, and the people in the audience as well, is listened to, is respected, and can use the platform it has to really encourage this business to move forward in what I hope to be very positive and encouraging ways.

Thank you.

MR. GARFIELD: Thanks, Ken and Phil. I just want to let you guys know I'm not one of the New York lawyers. I'm with Reuters, and some of you have heard of us. We have experience in electronic transactions in a number of areas, the first being FX. We've run an FX dealing system for many years and it has been a fairly successful venture for us. We also built the Globex product, and Instinet is also part of Reuters.

And all of these systems use different kinds of technology, but I think the only thing that we can be certain of with technology is that it's going to change. No one can predict what it will be , and there are certain advantages to having different kinds of technology ahead of

other people. But technology overall is probably not the biggest value driver in these businesses. It's really about creating communities, and some of the other people have mentioned this. And, you know, how do you create these communities? It's through liquidity, it's through transparency and credit. You know, easy credit is also part of that.

So how does the CFTC approach the problem here of making this industry move forward? I think one of the challenges for the CFTC is to look at this futures industry the way some other regulatory agencies have looked at other industries. Think about the telecom industry. It went from, you know, monopolies to a competitive marketplace, and that was really the best thing for the country and the ultimate end users.

Think of what is going on now in the electricity industry. Again, regulated monopolies are being forced to compete for customers in a free market environment. And that is, I think, how the CFTC should frame its thinking on approaching the deregulation or re-regulation of the futures industry. The goal should be to promote liquidity, transparency, and easy credit, and remove as many barriers to entry as possible, while still protecting the ultimate end users of these products.

That's all I have to say.

MR. CUNNINGHAM: You can probably tell by process of elimination that I am a New York lawyer. I'm Dan Cunningham from Cravath. And, John Gaine, it wasn't a salary cap problem. It was the no-grade clause I negotiated with Captain Johnson. You may want to remember that.

I'm here representing ISDA. I've represented ISDA for longer than I care to remember. It's an international trade group for the over-the-counter derivatives industry. ISDA has watched with great interest recent developments in electronic trading. Over the past 15 years, ISDA and other trade groups have built a documentation platform--always a thrilling topic I know, documentation--for bilateral trading. We've also developed collateral arrangements to support that architecture. That architecture is not perfect, but it's in place and it works pretty well.

When ISDA members now talk about what is important, they are doing their transactions in a very much global business. They want to do those transactions; they want to execute them faster, more accurately, and cheaper. It's almost a mantra that we hear. They are doing many of the same deals that they have always done and they have done for

the last ten years, but they want to do them faster, more accurately, and cheaper.

ISDA's approach to the new developments in electronic negotiation and execution is let many flowers blossom. We've seen projects to develop auto-matching of confirmations. We've seen interesting systems for trading of foreign exchange and similar products. We've seen other systems that promise to provide negotiation and execution facilities for a broader array of swaps.

As for the regulatory approach at the CFTC, I think in terms of electronic trading the President's Working Group report got it pretty much right. It's very early days. I think watch, look, and listen is very much the right approach. I don't see any serious policy issues coming out of these developments. The underlines are deep and liquid. The players are all very sophisticated.

To respond to a question from Phil Johnson, if there is to be an oversight function for electronic trading systems, do we need a new model or should we look at the existing Act? I think the answer to that is easy. It would be frustrating to work with the existing Act. It's a one-size-fits-all kind of statute. I think we should look at this afresh if that type of approach is to be developed.

And I think as we go forward, we should all remember that for all the time I've been doing over-the-counter derivatives, we've struggled with the Commodity Exchange Act as a one-size-fits-all law. It has been problematic for the exchanges. It has also been problematic in very different ways for those of us who do over-the-counter transactions.

So if we develop an oversight model for electronic trading, let's keep in mind that there may be some systems where that is appropriate, there may be others that need no regulation or supervision at all.

Thank you.

MR. ROSEN: Thank you, Phil. I'm Ed Rosen and I live in New Jersey, which I hope distinguishes me from some of my colleagues. I have one very concrete recommendation I can make, Mr. Chairman, and that is whatever you do, don't expand into the regulation of real estate.

[Laughter.]

MR. ROSEN: I want to say in answer to the specific question what the regulatory response to technology should be that the answer is a continuum. And on one end of the

continuum is next to nothing, in response, to "it depends." And you might say it's something of a picayune answer to give, but I think philosophically it's significant. The reason is that technology is not the driver and should not be the driver.

The question is what is the market paradigm that is facilitated by the use of technology, what policy issues does it raise, what challenges does it present, and what opportunities does it present for the Commission to leverage its resources and to lighten its burden in overseeing the markets.

And I think this is an important distinction because I think the major flaw in this statute--and I think it's implicit somewhat in what Dan just said--is Congress looked at this market and said I understand this market and this is how this market will be regulated and this is how this market will operate. And we have been straight-jacketed for over 60 years with that structure.

I think that this Commission needs to learn from that lesson, and that is to say you can't pre-cook the result. The response has to depend upon what issues are presented by the market paradigm that you're analyzing. I listened to Phil's comments with some interest, and I think thinking about the specific paradigm that he articulated, many of his observations I think I would agree with entirely.

But I'm not sure that's the market paradigm. I'm not sure we're not going to have electronic trading systems that are controlled by their users. I think one of the greatest frustrations that I've sensed is a perception in the user community that they don't have the degree of control over the trading environment that they would like to have.

On the clearing side, I'm not sure that the same forces that are leading the evolution of electronic trading platforms is the same, and I don't see that there necessarily is going to be a movement away from the mutualization of risk that is performed in a clearing corporation. And in this sense, I think, Larry, I don't subscribe to the view that maybe the FCM community is going to be dis-intermediated.

It may be that the center of gravity of their role moves more toward credit risk intermediation and more away from market risk intermediation with the benefits of an electronic platform. But on the clearing side, it seems to me there is this huge push toward making clearing more cost-efficient and more risk-mitigation-efficient. And there's no doubt that cross-margining is useful to that, but really to obtain the ultimate objectives, consolidation and

integration of the kinds that Hal referred to, are really critical.

Now, there are serious obstacles to that, and those obstacles are both regulatory and they are horizontal in the United States, and they are geographic. And there are serious obstacles to obtaining all of the benefits and cost savings that could be accomplished by further consolidation in the clearing industry.

I'm not sure that the trends in clearing are going to move away from member funding of credit support. I don't suppose that will really ever happen until the opportunity costs associated with member-funded costing is going to exceed third-party credit support. It seems to me when that happens, then you're going to potentially cross the Rubicon. But until then, the members are going to do it.

And with sophistication and aggregation of risk and looking at risk on a portfolio basis, it seems to me for a long time the dynamic is probably going to be in a direction which recognizes the fact that the firms are really the best judges and valuers of that risk. So I'm not sure how soon that trend will occur.

There are clearly some things that will go by the wayside immediately with electronic trading. Do you need a dual trading rule? I don't see why you need a dual trading rule. Is the audit trail perfect for everything? No, it's not going to solve every problem because some things aren't captured by the audit trail. But the data that is captured is robust and complete and you couldn't accomplish more. You know, do you need floor trader registration? Do you need floor broker registration, broker association rules? There's a lot of stuff that goes by the wayside.

But if you're really trying to figure out what you need to do, you really need to understand what challenges are presented by the market structure that you're confronting. And that may be different in the first 5 years than it is in the next 10 years. There may be a lot of niche players. There may not be fundamental changes or shifts in liquidity pools. Maybe there will be alliances, but maybe there still will be centralized exchanges with maybe different participants, more electronic.

Maybe you'll have market fragmentation, maybe you won't. Maybe it will be market fragmentation that you think is good and maybe it will be market fragmentation that you think you're going to need to address, whether it's through a central order book or cross-publication or cross-access on platforms. But you can't pre-judge it. What you need is a

regulatory approach that allows you to react flexibly and appropriately to it and to develop the tools.

I believe the first step is to sit down and say where are we today and what is an impediment because as the earlier speakers said, this market has to be driven by customer demand. And these intermediaries around the table are motivated by their desire what it is that the customer needs. And the one thing that this Commission can do that will be most meaningful is not so much to get out of the way, but to make it happen.

MS. CARLIN: I am a New York lawyer, but I can't imagine that I was one of the people included in the salary cap concerns. So they must have meant you, Phil, and just deemed you to be a New Yorker.

I want to start by really thanking you for putting this together. I commend this whole process because I can only tell you as in-house counsel at Morgan Stanley Dean Witter, it's enormously difficult to keep up with the activities of the business units I'm responsible for in the context of their ECN and ATS investments and BrokerTec and all of the different ways in which we participate in the market at this point. And if we're struggling, you must be struggling as well. And I think these are essential fora for getting the facts out, informing, educating and all that.

Let's also not lose sight of the fact that this technology debate is a subset of the larger debate. It's a subset of the larger CFTC debate in the context of OTCs and listed products and all of the other issues we've probably spent more time thinking about. But it's, of course, also a subset of the larger financial modernization debate, be it S. 900 and Glass-Stiegel and all that, but all of the iterations on that topic.

In no particular order, I guess I wanted to offer the following thoughts, firstly starting with clearance and settlement. My point of view is that clearance and settlement should not convert an unregulated product or matter into a regulated product or matter. So I start with the underlying corpus. I either observe or try to make judgments about how it is or should be regulated.

I think that clearance and settlement flows from that more fundamental regulatory judgment and should not be used as a tool for converting that which is unregulated and should remain unregulated into something which is regulated.

It goes without saying, of course, that clearance and settlement tools are good things for systemic risk and all

other purposes. I couldn't help but observe in the NASD's recent bond transparency proposal that they literally use reporting of transactions to GSCC as a bit of a hook to sell their bond transparency proposal because clearance is so powerful and the ability to clear is so powerful. I also think just in that vein that deliberations of the treatment of execution facilities really is a separate matter than clearance and settlement, and I like to bifurcate those two things.

Next, foreign competition. We talk a lot about how U.S. regulation generally drives business abroad. And, in fact, that's true. I think, you know, we lose sight of the fact that business overseas particularly in Europe, frankly, is growing for much more fundamental reasons that have nothing to do with U.S. regulation. It's about capturing retail investors in Europe; it's about migrating U.S. products, U.S. markets, to European fora.

So I see the impact of U.S. regulation, although substantial--and I don't want to sort of minimize that. I also separately see the Europeans, in particular, competing very effectively with us. Fixing our regulation is just another reason to care. In other words, we'd better fix our regulations because we certainly don't need to enhance or further the growth of other market centers that are growing, you know, with or without us.

So I wanted to sort of speak to that myth, if you will. You need only look at the regional revenue splits within Morgan Stanley over a ten-year period, and I'm sure Goldman Sachs as well, Merrill and others, to see the shift of revenues. And I do not believe that any regulation is so powerful.

Lastly, you asked, Commissioner Newsome, specifically what should the Commission do to ensure customer protection issues are appropriately addressed. And I guess I'm more in Larry's camp than anyone else's in the context of the best practices. I start from the point of view of wanting to identify the core customer protection priorities. What are the issues? What do people need protection from? And it seems to me that that becomes a good vehicle for figuring out the solutions.

As an example, trade or other reporting mechanisms are probably useful tools in the context of certain customer protection priorities. Transparency is also a useful tool, and I'm heartened by hearing that transparency is being described as transparent bids and offers rather than trade reporting mechanisms in which, you know, everyone's transactions are disseminated to everyone else directly after they are conducted.

And lastly, and maybe this is my boldest statement, I'm not sure I agree that self-regulation is as we've always understood it as part of organized self-regulatory organizations, be they member-oriented or otherwise. We need only look at things like G-30 and G-12 to see the impact of true self-regulation by oneself, of oneself, not within an organizational framework. And I submit that G-30, and I hope G-12, will prove to be more impactful than most regulation.

That's it for me.

MR. JOHNSON: We'll take a few questions.

MR. WOLKOFF: Thank you. There's been some discussion by this panel and others about regulation as a barrier to entry, and I think what tends to be meant about that is regulation as a barrier to entry for new marketplaces, companies that would like to be an exchange or the equivalent of an exchange.

And the question that I have--and particularly, I mean Ken had mentioned on one of his tiers of regulation that there could be a framework of inter-market dealer networks that are relatively unregulated by the CFTC. At the exchange level, one of the reasons that there are regulations and barriers to entry for those who wish to become exchanges is that it's a public market concept, meaning that we are completely non-discriminatory, and that raises, you know, its own issues.

As we go off into unregulated or non-regulated dealer exchanges essentially, what is going to be the protection with respect to those creating barriers to entry at really the customer level or the user level, that they will simply be used as a mechanism for consolidating industry power or market power to the exclusion of others? Right now, the CFTC does play a pretty strong role in assuring market access and market fairness from the perspective of maintaining competitiveness in the marketplace. And I was wondering if you had views on that.

MR. JOHNSON: Ed?

MR. ROSEN: I think that's a legitimate question. I think that one of the provisions of the Act that will probably have an abiding role here is the need to take into consideration the public interest protected by the antitrust laws. And there are many market paradigms that are limited to participation by, for example, professionals or dealers, for good reason.

And there are circumstances where you can do that and there are circumstances where you can't, very frequently defined by your market dominance and the presence of other competitive vehicles. I think that needs to continue to be part of the analysis going forward.

MR. RAISLER: I'd just like to make an additional observation. I think that I agree with my colleagues that we would certainly prefer a new Commodity Exchange Act, that the Commodity Exchange Act has in many respects been an exercise in frustration for those of us who have been following it for a long period of time.

But I would also point out that we're looking at a very dynamic world where the time period of change is measured in months or days rather than years, and the legislative process has been measured in much longer time frames. So I believe that while the Act is imperfect, there's an awful lot that the Commission can do in the very near term to solve and respond and to use its authorities in a positive way to promote the kind of developments that we discussed during the course of this afternoon.

And I would urge that that power be used to its fullest extent in the near term rather than waiting for a legislative solution which, if it does come, because of the difficulties of some of the issues that were raised here and also last week, will come slowly and unsatisfactorily, ultimately. So I just want to put that point on the record as well.

COMMISSIONER NEWSOME: We've gone beyond time this afternoon, and we're going to have other opportunities to discuss this very subject and others. I would like as we close to ask the other Commissioners if they have any comments or questions they would like to ask.

COMMISSIONER HOLUM: I would simply like to make my own prediction, and that is if we all continue to meet together as we have this afternoon and last week with all of you coming together in a spirit of cooperation and giving us your very thoughtful insights on where the markets are going and where the regulators ought to be going, I predict that we will come out of reauthorization with some legislation that will enable all of our markets to remain competitive. And I would like to also thank you all for being here today, and I look forward to many more of these sessions.

COMMISSIONER SPEARS: I'd also like to second what Barbara just said and thank all of you for being here. I also want to give special thanks to Chairman Rainer and Commissioner Newsome for putting on this excellent program,

and for their staff and all the work they did. It has been a very beneficial resource to the Commission, and thank you.

COMMISSIONER NEWSOME: Tom?

COMMISSIONER ERICKSON: I would just add my thanks to everyone who participated today, to the Chairman, and to Commissioner Newsome, and all the fine tutorials I've gotten. I've got quite a homework assignment and I'll do my due diligence.

COMMISSIONER NEWSOME: Thank you, Tom.

I wanted to give special thanks to Phil, Hal, Tony and David for leading their discussion groups. It was a non-traditional group discussing a very non-traditional topic.

And, Mr. Chairman, as we turn the podium back over to you, hopefully we've laid adequate ground work for the Technology Advisory Committee.

CHAIRMAN RAINER: Thank you very much. I've got a three-dollar bid for Hal's Lexus.

[Laughter.]

CHAIRMAN RAINER: I'm not going to make a long type of speech, but we're all very appreciative of each one of you for your participation. I think I can say with confidence that we've all learned a great deal today. I'm very proud of the willingness of the talented people around this table to come and share your time and wisdom with us. We'll do our best to move forward.

We're adjourned. Thank you.

Whereupon, at 4:53 p.m., the Technology Roundtable was concluded.]