

SEC HISTORICAL SOCIETY Webcast Transcript

The Best of NERA 2007 July 31, 2007

LAWRENCE MITCHELL: Good afternoon and welcome to the Securities and Exchange Commission Historical Society's "The Best of NERA 2007" online program, broadcast on www.sechistorical.org. I'm Lawrence Mitchell, Theodore Rinehart Professor of Business Law at The George Washington University Law School, author of the forthcoming [Speculation Economy: How Finance Triumphed over Industry](#), and today's moderator for the program.

As our listeners may know, the SEC Historical Society preserves and shares the history of the U.S. Securities and Exchange Commission and of the securities industry through its virtual museum and archive available at www.sechistorical.org. The museum's collections of over 2,000 primary materials, not easily available through other online sources, are free and accessible worldwide at all times. The virtual museum and archive as well as the Society are separate and independent of the SEC and receive no federal funding.

It's my privilege today to welcome members of the staff of NERA Economic Consulting, presenting what have been deemed the top presentations from their recent Finance, Law and Securities Litigation seminar. This is the fourth annual Best of NERA program broadcast by the SEC Historical Society. Past Best of NERA programs can be accessed through the Online Programs section of the virtual museum and archive at any time.

Joining with me today are Dr. Sharon Brown-Hruska, NERA Vice President; Dr. Patrick Conroy, also a NERA Vice-President and a participant in last year's Best of NERA , and Dr. Robert Mackay, NERA Senior Vice President.

On behalf of the SEC Historical Society, I would like to thank NERA Economic Consulting for its generous sponsorship of today's program. Its support, along with gifts and grants from many other institutions and individuals, is helping to make possible the growth and outreach of the virtual museum this year.

The remarks made today are solely those of the speakers and are not representative of the Society. Our speakers cannot give legal or investment advice. Sharon, Pat and Robert welcome.

PATRICK CONROY: Thank you.

LAWRENCE MITCHELL: Pat why don't we start with you?

PATRICK CONROY: Thank you, Lawrence. It's nice to be here. Being a former SEC staffer, today I'm going to talk about securities trading, and it reminded me a little bit back when I first got to the SEC and my first assignment. The Chief Economist at that time, Erik Sirri, gave me a task of analyzing something called 12g3-2(b) stocks. Being a

new staff member, of course I said, "Absolutely," which meant I absolutely had no idea what those are. It turns out they were foreign bulletin board stocks that are listed in the United States.

Today, we are going to talk about specialist trading of New York Stock Exchange stocks which are obviously much bigger and well known throughout the world, but just about as complicated to understand how they work. I think even though people are aware of them generally, a lot of the details of how they get traded only have come to light recently with all these specialist trading cases that took place on the New York Stock Exchange.

Standing back for a second, over the last few years we've got an increasing number of very complex trading cases - insider cases, dealing with mutual funds, hedge funds, options trading and options execution quality, commodities, pipes, ECN's, and cross trading, which is trading across accounts within brokerages. A lot of these cases have very large data sets as well. The specialists' case we're going to be talking about is a trading case which is not dissimilar from others and a lot of the issues that you deal with. The data you're using, the context of the trading and the type of analysis you're going to do to show what truly happened in the market at that time.

In all of the trading cases, there seems to be an overriding question, and the question is, for the given quantity that was traded, was it executed at the right price and was it executed at the right time? And that's where a lot of these cases start. The specialist cases came about when the government brought charges against 15 different specialists from the New York Stock Exchange for a certain pattern of trading which they deemed violated the rules. I'm going to go into explaining briefly what type of trading it was. But let me just preface it and tell you what the outcome of all of the 15 specialists cases were.

Two of the specialists were found guilty; one was found guilty by jury and then acquitted. Two pled guilty, one was acquitted by the jury, one fled the country and eight of the cases were dropped. Given that laundry list of different outcomes, it's clear it wasn't an easy thing to understand, and that even for the ones that were found guilty, the facts differed among them. Some had conspiracy charges, whereas others did not, which may have made part of the difference. So it doesn't seem straightforward.

So, what is the specialist? Really briefly, the specialist is an employee who makes markets in stocks on the New York Stock Exchange. These are not owned by the Exchange or run by the Exchange; they are separate companies. A bit of history is that the specialist came about in the 1800s when one of the traders broke his leg and was sitting in a chair; they sat him in the chair and basically had him trade one stock all day. And that seemed to work out pretty well, and the system evolved. For instance, in one of the specialist's cases, the specialist traded only GE and traded GE all day.

What were they accused of? Two things - one thing called trading ahead and one called inter-positioning. Trading ahead was simply when the specialist traded before a public order. In inter-positioning trade, it was simply when there were two orders that arrived at the specialist at the same time. The specialist, instead of crossing those orders, would buy from one and then sell to the other, making a profit because the buy price is lower than the sell price. I'll give a quick numerical example of that later.

How did the government make its case? Well, it was very complex with a lot of computer algorithms that they created and a number of assumptions about how the data came into the DTC system. They showed that a certain percentage of trades made by the specialist were inter-positioning trades. The assumptions made in the algorithm were varied because what they were trying to show is a snapshot of something that was going on which was actually really a flow in time. Let me give you an example of the screen shots that they would produce.

They might find one trade which they thought was an inter-positioning trade be it the rules of their algorithm. That trade might have transpired over five seconds, but in that five seconds, there could literally be thousands of screen shots in order to show the sequence of what was going on. And in fact the trade that was singled out as an inter-positioning trade, might only have been one of hundreds of trades that were taking place over that time period. So it was very difficult to understand out of context what an inter-positioning trade looked like.

An example is, suppose Derek Jeter of the Yankees is accused of not fielding the ball properly in order to throw games. What you do is you take very close up snapshots of him. You see the ball coming, you see it bounce up, you see it go right over his glove and so your conclusion is, he missed it on purpose. But you didn't see all the other things that were going on around them - fans yelling, another runner trying to steal second base. And so out of context, it's very difficult to understand what's going on in the game. The same is true of the specialists.

Going back, the government said that investors had an expectation that they would receive the best price and therefore the specialists made illegal profits by inter-positioning. The defense countered in a number of ways. They said, well, sometimes the specialist wasn't at his post. The specialist doesn't actually do all the trades; there are clerks that entered the trades. It may not have been deliberate. People make mistakes, it's a very fast market, it's very complex, even a skilled professional makes mistakes sometimes.

So let me go back and give you a quick numerical example of an inter-positioning and then conclude by telling you how the case came out. Again, if there was a trade where the current bid is at a \$100 and the ask price is a \$101 and two orders come in at the same time, each to buy 500 shares. A few outcomes could happen. First, they could both sell at \$100.50. Second, the buy order could go for \$100 and the sell order for \$101 and there would be \$1.00 profit. And the third, the specialist could execute one of the orders at \$100.25 and the other order at \$100.75, and capture \$0.50 of the profit. So again even inter-positioning is not quite clear. Would the investor be expected to be executed at the bid or the ask or inside the bid and the ask? There are no clear rules on that.

After all the evidence came forward, one of the specialists was found guilty by the jury, but the judge overturned that and acquitted. There were a number of reasons why that was done. First of all, some of the reasons cited were that there is a crowd involvement in trading on the New York Stock Exchange. So it was clear that there were times when the specialists may not have been paying attention to the electronic orders that were coming in, but may have been talking with the crowd. The government contention was always that the legs of the trade, meaning the first trade of the IP and the second trade of the IP, were very close together. In fact, sometimes it was many seconds before the

different legs of the trade passed. There were times when the specialist wasn't even at the post, perhaps had gone to lunch, to the bathroom, other things when these alleged IPs took place. And oftentimes there were intervening trades between legs of an IP, so the first trade would be executed, then the specialist would execute other trades and then the second matching trade would be executed. But the algorithm didn't take into account the intervening trades, only the two legs. And finally, it was often the case that while the government's algorithm might be easy to look at and say, 100 shares executed against another 100 shares making it a nice clean transaction, that the two sides of the leg were mismatched. The buy side could have been 5,000 shares and the sell side only 400 shares showing an inter-positioning of 400 shares. So there were a good number of reasons why the judge came up with the overturning.

In general I think that this was a good example of a very complex trading analysis. It had many issues that the jury had to understand that were outside of what one would expect a regular person to understand and it's likely that we'll be getting more of these types of trading analysis in the future.

LAWRENCE MITCHELL: Thanks, Pat, that was really fascinating, in one of what I think is one of the most arcane and difficult to understand aspects of securities trading there is, and I look forward to asking you some questions later. Bob?

ROBERT MACKAY: Yes, thank you, Lawrence. My talk is on recent allegations of manipulation in commodity markets and the 'recent' needs to be qualified, since this talk was prepared for the NERA conference a month ago. I am not referring to the recent show cause orders and complaints filed by the CFTC and the FERC, although I have a few things to say about it. It's not quite that recent.

If we turn to commodity market manipulation, there is the traditional forms of commodity market manipulation that we're somewhat familiar with, the corner or the squeeze where a long participant in the market, for example builds up a very large long position in some commodity, let's say silver or soy beans and simultaneously is able to acquire a dominant position in the deliverable commodity, and then as the contract goes to expiration, the long stands for delivery. As the shorts scramble to find the commodity, they can't find it since the long owns it and the long is unable to extract a high price from the shorts to get out of the market. Maybe this was what was going on in the Hunt Silver case as some have alleged, and maybe some of this was going in the recent Sumitomo copper litigation that dragged on for over a decade.

But I really want to talk more about some new forms of manipulation. There are some sense variations on the traditional corner squeeze and variations on the old rumor, that is, you can manipulate the market by spreading a false rumor. Related to the traditional corner or squeeze is recent concern that the CFTC has expressed about trading in a way that exacerbates market congestion. They've brought investigations in the cases in which they allege that traders know the market is congested, and rather than backing off or not doing anything, they actually trade into that congestion and make it worse. There's concerns on their part that that may well constitute manipulation.

I think in fact the recent CFTC complaint that came out last week and the FERC complaint charging manipulation by Amaranth and in the CFTC's case in two, the exploration of two contract months and in FERC in three are taking this even to one step further. Basically they are talking about slamming or jamming the close of the contract,

that is postponing trade until the last eight minutes for example of trading and that's as to affect the settlement price on the NYMEX contract, which is then used to settle various over the counter or contracts traded on another exchange. So that's another type of manipulation that really I think we are going to see a lot more of, and there's a lot of current investigations on going beyond just the Amaranth complaint.

The one I want to focus on really is the variant of the rumor case. And over the last few years, there's been allegations that participants in the commodity markets and in particular in the natural gas markets deliberately misreported either their trades or the prices at which they traded to the industry trade publications which collect these prices and create indices that they then publish. Those indices, by the way, are frequently used to settle certain contracts. I believe over two dozen firms settled for over \$300 million with the CFTC, with respect to their alleged misreporting of these trades.

Not surprisingly, class action suits followed. And there was a major class action suit alleging that these firms' misreporting in the cash market led to a manipulation of the NYMEX futures contract. So that really was the hypothesis. And let's see if we can as an example think about how one might go about analyzing that.

Now it's certainly true that news can have a major impact on prices. A good example from the commodity markets is natural gas storage reports. They come out once a week, they are widely watched and widely anticipated, and when the report turns out to be different than what the market anticipated, the market moves and it can move significantly in that case. In fact, there is a notorious example of this going back to November of 2004 when the EIA, which is the Energy Information Agency, reported that storage was 32 billion cubic feet lower than expected. This was right after Thanksgiving. In the course of that day the prompt month price rallied over \$1.50 from around \$6.50, and the spread to the next month narrowed dramatically in response to that announcement. It turned out that the report was incorrect. One of the firms that was filing the report just put down the wrong number. Within four days, the market would have corrected that and the price had already traded off some, but it fell a dollar. So there's a nice example of which news, in this case it happened to be incorrect news, really moved the market.

It's certainly possible that putting out an incorrect index through Platt's could have an impact on the market. But I think it's important to realize that when Platt's publishes an index that says natural gas trading at Henry Hub or at some other delivery point, was at an average price of X yesterday, that's not the only information that the market participants have, because market participants are seeing not only their own quotes and their own trades, they are also seeing what their brokers tell them and those that want to bother, for example, could pull up the Inter-Continental Exchange terminal and watch cash trading all day. Participants in this market don't wait to read Platt's when it comes out to find out what's going on. They actually have their own observations of what's happening.

So the real question then is to what extent is there something in Platt's that's different from what the market is observing and does that news, let's call that difference, "news," does that news impact the futures market? How might we go about testing that? I want to lay out three ways in which we can do that. One draws on the analogy with the release of the EIA report. The Platt's surveys market participants starting around 12:30 at the end of cash trading; they survey for a few hours. They stop surveying and then

process the survey; around 8:00 o'clock at night, they send out, by fax or by e-mail, the index to their subscribers. If the traders really thought there was important information in that publication, they could be sitting at their desk and they could get it, open it up, read it and trade on it just like they do when the EIA announces storage reports. Or at the minimum when they show up at the next morning at 6:00 o'clock and they look at it, they could start trading. And in fact, they can trade on it. If they get it at night, they can trade on the Access electronic system at NYMEX, or they could at the time these allegations were made.

And it turns out actually if you look at the storage report releases, they really have a major impact on volatility. There was a wonderful study done by a couple of economists that looked at volatility around the time when around 2:00 o'clock when the storage reports came out, and you find if you go back historically there's a real spike in volatility in the market and it's even more interesting than that because the EIA changed when it reported from in the afternoon to in the morning, and the spike in volatility has moved right here in the morning. So if something real is going on, it will show up in the data, and you can see it. One way to check is to see if anything happens during the night to volatility when Platt's is released. We went and we looked. We calculated five minute rolling volatility and we wanted to see overnight, was there a spike when that report was released and there was none, in fact it just looks like a total flat line. So that was one way to try to see if the release of the report had any impact.

Well you might think, maybe not at night but when the traders come in the next morning, they get the report, maybe they start trading on it and if they do trade on that information, then it ought to show up in the futures returns that day. So a second way to try to test for this is to say, is the news in the report that is the difference between the Platt's report and let's say a benchmark of prices that could have been observed in the market -- is that news correlated with the futures returns? It turns out that if you actually look at that correlation, there is a correlation between the news and the futures open-to-open return. And that's kind of interesting, it's actually a statistically significant return and that might make you think there is something to this. Now the only problem with that is -- this report comes out at night, it could be read in the morning, so if it's going to have an impact, it seems like it should have an impact on the close-to-open return. But when you look at that correlation, it's really small and is statistically insignificant. The effect on the next day's open-to-close return, the normal return is also statistically insignificant.

But where does this correlation in the open-to-open return come from. Well what's interesting is it is actually driven by yesterday's futures open-to-close return. That's correlated with the news. What's interesting about that though is the news can't cause that since it occurred the day before. So the causality here has to go the other way that in fact, partly what's going on is that the surveying is going on while the trading is still taking place.

There's a third way to check whether or not this news has an impact and that's to go out and run an econometric model on the determinants of spot prices and the determinants of futures prices and add the news to that equation, and see if it better explains the spot price changes. Well, it turns out, if you do that and if you run what economists would call a vector error correcting model of simultaneously determining spot price changes and futures changes, that news has no impact on the spot prices and it has no statistical impact on the futures prices. So in this particular case, despite what might have seemed like a plausible impact, just in some general sense, when you do the economic and the

econometric analysis, it's very difficult to isolate that. And in some sense I think economics in this case shows that that particular allegation or manipulation is probably not warranted.

LAWRENCE MITCHELL: It's really fascinating, when is fraud not a fraud? When you talked about the increase in volatility on the storage release reports, I was immediately brought to mind the first time I understood commodities trading, The Eddie Murphy, Dan Ackroyd movie, Trading Places.

ROBERT MACKAY: That's a great example.

LAURENCE MITCHELL: Fabulous, fabulous moment, at least for me intellectually where I could say okay, that's what it does. Sharon, up to you.

SHARON BROWN-HRUSKA: Well, thanks very much. I remember, because basically he explained it by setting the breakfast table and putting the eggs and the coffee. It is a fascinating market and I think it is really a pleasure for Robert and I to be here, coming from the futures side of the equation as an asset market and have a chance to talk to the securities professionals in the SEC Historical Society because I have always felt that derivatives do need a little extra explanation and understanding.

My talk is on market manipulation - managing regulatory and legal risk. And the reason I selected this as my topic is that many may know I served as Commissioner and Acting Chairman at the Commodity Futures Trading Commission, before I joined NERA. I wanted to give companies and entities participating in the market and even the public a way to better understand the environment in which traders operate especially in the futures context and also how regulators view the world.

Regulators, as Robert mentioned before, have been investigating market manipulation in various markets, but there has been a specific focus recently in the energy area, some cases that were brought by my agency when I was there. The British Petroleum cases and crude oil, gas, propane, AEP, Duke, Reliant, El Paso, Dynergy and many others were brought for conduct related to natural gas mis-reporting. Recently, we have seen the CFTC jointly with the Federal Energy Regulatory Commission bringing a case against hedge fund Amaranth and its traders.

When I was appointed to my post as regulator five years ago, I had the pleasure of working with some really amazing enforcement attorneys all the way up to the corporate fraud task force and Jim Comey and Bill McDunn at the PCAOB. And one thing I would say is beginning with Enron and continuing even today, the government has really brought it to a more rigorous and high level for pursuing companies for alleged manipulation, particularly in the energy complex, but in all asset classes. Not only are these their cases that have been brought in the traditional boundaries at the various agencies jurisdictions, there has been a drive to expand into new territories, with for example the futures market regulator looking beyond the exchange traded futures market to over the counter markets. I think again we see that in the Amaranth case where the one case that was brought by the CFTC, all of the conduct appears to have occurred in over the counter and cash markets. The CFTC has also frequently reassured Congress that it's requested and received daily position data regarding the firm's activities in over the counter markets. So, we see that they are sort of flexing beyond their traditional boundaries.

And the other agency that I'll mention, the Federal Energy Regulatory Commission, also sees futures activity as sufficiently in connection with its jurisdictional mandate to implement routine, real time monitoring in the futures markets. So they've looked beyond their traditional authority in the wholesale markets and set their sights on financial markets including the futures markets.

And not only are these regulatory agencies watching trading activity in markets outside their jurisdiction, they are in some sense also eyeing each other. If you look at the recent cases that have been brought, you can see a great deal of cooperation and working together to bring these actions. I think that this again is part of the progression that started earlier, say five or so years ago, where we realized that agencies can accomplish a great deal more when they work together.

They also take somewhat different approaches. I would say the CFTC has always focused their emphasis on trying to find where prices are artificial, and in some sense, not reflecting underlying market conditions. The FERC, given their traditional role of protecting consumers from what were purported monopoly gas and power companies, have focused on the somewhat more subjective standard whether a price is just and reasonable.

Both scores for these standards are continuously being written. But a key point is that they are fundamentally economic in nature. Regulators enforcing them use economic tools to monitor the markets and identify unusual prices. And the companies who are in the sights would benefit greatly if they too were able to employ the same tools to help manage their own regulatory and legal risks to sort of know what the regulator knows about their trading. That way they can respond proactively to the changing regulatory environment. They can know who and what agencies are monitoring their activities and be prepared to respond to enquiries.

For example, firms trading extensively in multiple markets can better manage their regulatory and legal risk, if they focus their internal compliance resources on that type of their trading activities. And they can be more cost effective in their expenditures on compliance.

The companies should consider or may consider a risk focused trading surveillance program. How would you do that? Well, as a former regulator I should admit that when I was at the CFTC we had a really amazing stable of economists who devoted a lot of time and resources to monitoring the markets. They focused on time periods that displayed unusual prices and price relationships. One type of surveillance program that would help companies to prepare would do the same thing by surveying all the days in a systematic manner, by identifying those days that the regulators would also consider unusual and then prioritizing those days for further internal investigation. That way a company will be better prepared to manage their regulatory and legal risks going forward.

How would a program identify these periods? First, a program would look at the basic market factors like prices and other factors that regulators consider. You can look at them directly to see where the change observed falls within a historical distribution, what we call an unconditional review, to see if these prices and these economic factors are unusual. Then the factors should be put into context, some kind of model of underlying

economics to see if given that review, they're still unusual. So what we've kind of thought is what you could use and economic models to determine what might explain the market moves. This defines a conditional distribution that says, okay given these relationships, given this level of volatility, is this price unusual? You've been able to screen on two levels, the unconditional and the conditional, and you have been able to identify some unusual days that are likely to receive additional regulatory scrutiny. Once you have got them there, related to Robert's talk, there might be some market news or information out there, some economic event or just a supply and demand related factor that caused that day to be unusual.

But in either case, after you've identified them, screened them, and checked to see if there were any news events that may have explained them, it would allow you to then take what's left and write them based on how unusual and whether you need to do some further scrutinizing of the trading activities.

Certainly you want to examine market factors in both the futures and cash markets. So, if you are thinking about what you are considering, what are you going to evaluate, look at market factors. You might also want to look at some non-price information that tends to be of interest to regulators. Since we are interested in market dominance, control of supply, or large positions, we also would tend to want to look at physical positions, the positions in the cash and over the counter derivatives markets and you also want to look at market concentration.

And the first variables most relevant for you I think would include looking at changes in spot prices, changes in futures prices, changes in the spot futures basis, in other words, there is sort of regular relationship between the spot and futures and the calendar spread between the near month and the second month maturities. Then the data are examined in critical areas and you'll look the number of deliveries, the size of trader positions relative to the market and the volatility. After doing this, you could register these results on a scorecard, where you keep track of those days that display unusual levels for the various values.

And as an illustration, consider the daily change in the basis for a commodity for a few months. The basis is the difference between the futures and spot price. You could plot those daily values and note those cases that were outside the normal range for those that the change exceeded that of what it is 90% of the time. Those outside the historical distribution could be marked on your scorecard, as you keep track of those unusual days.

And similarly you could do that in your conditional model. I mentioned you'd build an economic model that put those days in context that would capture the relationships among the various market factors that might influence their variables. We use the vector error correction model, that basically looks at the same unconditional variables but recognizes that they are really interrelated and that what happened yesterday affects what happens today. And again you set up some level of confidence intervals where you would see where they are outside historical value and determine whether or not they are outliers in this conditional model.

Once you apply the economic model, whether it's predicted by the economies, that will help you to determine whether these days should be worthy of additional screening. As I mentioned, you would check on those days that you would have flagged based on the

news that may have occurred. There might be things like a pipeline explosion or a hurricane warning or a bad weather report that may give rise to the unusual pricing behavior, and that would allow you to rank them according to sort of the good, the bad and the ugly. The latter being the unusual and unexplained by economic conditions over the news.

At this juncture, you've got what regulators have, a view of what was going in the markets that can be used to help prepare for potential scrutiny and also demonstrates knowledge of market factors at work that may help explain trader activities. One possible use of this sort of risk based surveillance protocol would be for internal compliance. After you have identified the days that are likely to be suspect, a review could be done to see whether the firm's traders were active in the market, or whether regulatory authorities would be calling. If they were, compliance may wish to enquire about their activities, their strategies and their overall aims in the market. If that raises concerns, then the firm may want to review P&L records, perhaps review trading records and tapes and e-mails.

I think the key conclusion that I would say is, if you bring a sort of focused surveillance program that's on par with the regulatory authorities companies, managers, the board even, it would have a mechanism in place that better prepares them to navigate the markets, which is characterized by the increased regulatory scrutiny and legal risk.

LAWRENCE MITCHELL: Sharon, that was really interesting and good advice starting with the age old premise, know your enemy. Certainly sounds like, if you were adopt your programs, there'd be little need for regulators and so you'd be replicating the regulatory system in house.

I have questions for all of you, Robert and Pat. I have a question that has a basic relationship, they're two related questions, but I'll start with Robert. It sounds like in this particular study you may have discovered the economist's Holy Grail of the perfectly efficient market. Is that true, does your research really suggest that? And if so, what kind of regulatory regime should govern the market that works so neatly that the main formal source of news is essentially relevant?

ROBERT MACKAY: Interesting question. It does turn out that if you actually run the regressions and estimate the model that the natural gas future markets appears to be quite an efficient market. That is, it's basically a random walk as you would expect with an efficient stock market. And it doesn't respond to yesterday's spot price. It actually responds to surprise weather and surprise storage reports, and then it incorporates in an efficient way, the real news that comes into the market. I think the critical point here is that that publication, that's the market's primary source of that information, that's just one source of that information. Traders are sitting at their desk all day watching prices. They are seeing the prices. They are making the prices. So when that report comes out, only a part of that is news.

PATRICK CONROY: Actually it sounds to me like no part of that is really news.

ROBERT MACKAY: In fact in this particular case, the news had no systematic effect. That's right. Whatever, there was difference, there was a difference between that report and the benchmark we constructed.

PATRICK CONROY: Then the publisher had some kind of threat value and he is just collecting rents.

ROBERT MACKAY: Or well, no I shouldn't say that. The indexes are used for important purposes. They are used as a way of settling certain contracts, because it's just like you create any index and then the basis contract may well settle off of that. Now whether there is some legitimate complaint that, oh, you affected that index at this far delivery point in Midland and when I settle my cash contract, I didn't get paid the right amount of money, that's totally different question than I was talking about. I am talking about did that missed report at Midland have an impact on the futures market. We didn't find that. So it's a distance but I believe that the natural gas futures market is very efficient market.

SHARON BROWN-HRUSKA: I think what you've mentioned and to summarize is that markets serve this very important role which is price discovery and this is, it shows that a great deal of price discovery occurred before the Platt's index was ever published. And so it really is just a summary of the price discovery that the market had already engaged in.

PATRICK CONROY: I think it's hard to parallel, but we find with analyst reports, a lot of times there's no reaction with analyst reports. In fact I think one of the biggest purchasers of analyst reports are now us, historically going back, and figuring out what the analysts said during certain company announcements. They used to give us a lot of old analyst reports for free. Now they realize that we actually need these for litigation purposes. I think it's the same general thing that that kind of news is already in there and even most of the analyst reports are kind of in line with each other.

LAWRENCE MITCHELL: Let's talk about the stock market for a second. The stock market was originally a capital allocation mechanism, a capital raising mechanism, which in no respect is really in any significant way at this point. When we talk about price discovery in a futures market where you've got actual deliverable commodities, it seems to me that that makes very good sense. Does it make as much sense to talk about the stock markets as a price discovery mechanism when we know that the stock market has significant impacts for example, on the behavior of corporate governance, on corporate cost of capital and the like?

PATRICK CONROY: I think our history is very short, when the IPO runup was all going on, prices were opening and then taking off. So, it clearly was price discovery where people were setting the opening price, that was very different. I think in short term there was a lot of price discovery.

LAWRENCE MITCHELL: Well, but in longer historical view, that's not the case, right. What you are talking about - a real bubble period?

PATRICK CONROY: Now there are many small companies that are going public with pipes, reverse mergers, all these type of things that are using it as their main access of capital. And how those prices are set, and clearly for big companies that have so much financial information and fixed income securities that they've got out, and there is not a lot of knowledge you are going to get from the equities. But maybe dividing it up into smaller companies, and maybe part of the answer will be, as we become more international, globally in the markets that will be accessing your information cross border, that way more efficiently, maybe it will help. Certainly the problem with fixed income is

that they really don't trade. So you don't really have any time you try and look at price reactions to bonds, it's difficult to figure it out because there is no trading. So, we go to the equity market to find out when something is material. Because we can find out quickly how the market perceives that materiality.

LAWRENCE MITCHELL: Interesting. One question I had for you, based on your presentation is this, even for somebody who considers myself to be marginally sophisticated, the mechanisms of trading are enormously complex and you did a beautiful job of explaining that complexity in a fairly comprehensible way. I was able to follow every step of it. But you are talking about something that is massively complicated, that occurs at virtually blinding speed, when the numbers are constantly moving and they are hard to track. Given that kind of trading environment, how can you distinguish between an honest specialist and a specialist who isn't playing by the rules?

The implication listening to you is at least that some economic analysis of specialist trading would lead us to think that we just simply have to suck it up, accept that there is going to be some dishonesty in the specialists market. Have some rules for really egregious violations, and just kind of ride it as it is. There is not much we can do about it from a regulatory standpoint, is that true?

PATRICK CONROY: Tough question. I guess, in my opinion, I would answer it in two ways. One, I'm a less regulation versus more regulation person, because I think markets are very good at figuring out those inefficiencies and any time we try and put in regulations, you are pretty much inviting people to find ways to come up with new paths. In fact, probably one of the reasons you find it so complicated is because regulations have been put on top of each other to deal with the fact that the New York Stock Exchange for a long time has not embraced new technology. So now when new technology is coming in, DOT trading is getting very fast, decimalization takes place, it's growing pains, until people get used to the new system. Eventually, rules will be taken away as quickly as they are put. You can see all those specialists companies now, most of them are taking very large charges right now against future earnings.

ROBERT MACKAY: Can I build on your question?

LAWRENCE MITCHELL: Absolutely.

ROBERT MACKAY: I wanted to ask Pat, you started out on your talk, talking about trading ahead and inter-positioning and then you very quickly stopped talking about trading ahead, and you only talked about inter-positioning, why was that?

PATRICK CONROY: The trading ahead proved to be a very difficult thing for all parties to get their hands around in terms of damages. Again, it goes back to rules, but quickly the government dropped the trading ahead allegations against the specialists they were taking to trial. Whether that was because they felt they only needed the inter-positioning allegations or they felt it was complicated to come up with a number. It goes right back to your question, which is part of the trading allegations where they were profitable whenever the specialist traded ahead. However there are rules on the New York Stock Exchange dictating when specialists can trade based on the previous tick, they're also almost mandated that it'd be a profitable trade. So, it's never again quite clear cut how it's going to be and for whatever strategy reasons they decided.

ROBERT MACKAY: That's an interesting comment, because about a decade ago, I worked on a case in which there was trading ahead of the commodity trading firm. The firm's strategy was being called outside the firm. This was at the sentencing stage, and we were supposed to figure out how much damage was done. And it was hard to come up with a big number because the markets were incredibly liquid and the trades ahead were fairly small, so they probably didn't damage the market much. But they still made money.

PATRICK CONROY: That's right.

ROBERT MACKAY: So I can imagine that being a difficult empirical exercise.

PATRICK CONROY: Right, and I think the amounts were very small.

LAWRENCE MITCHELL: Interesting phrase, 'didn't damage the market much' and Pat I am going to stay with you for another minute. Sharon, you gave Pat the thumbs up when he said markets are pretty good and adjust pretty quickly. And while that may well be true, of course we know that that's true on a macro level right, the markets will adjust. But we still have the possibility that individual traders are going to be hurt during this market adjustment period. Some of that is rules of the game; you've got better information than somebody else, some people win, some people lose, but when you introduce irregularities perhaps, advantages that ordinary people might consider unfair, how can an economist help us to address that particular problem, whereas again maybe I am hammering the question, but I'll come back to you, this is something we simply have to live with and is part of the cost of doing business.

SHARON BROWN-HRUSKA: The one key word that we're missing when we talk about markets is they're competitive markets. And you enter and utilize markets as a means to, I mean why are we all using the securities markets, I am sure it is so that we can grow our nest egg to make money. I mean that's what we are trying to do, and everyone in that market is seeking to do so. And unless there is a certain rule that enables, or a certain market structure that enables, one participant to gain market power at the disadvantage of another, which many have, for many years people have thought this specialist system conveyed market power.

LAURENCE MITCHELL: That almost structurally does, doesn't it?

SHARON BROWN-HRUSKA: Yes, but whose fault is that, I mean where does it come from. It actually had been in doubt for a long time, by regulation itself because it was thought that you needed a specialist to have an orderly marketplace. So in some sense from a regulatory perspective we actually sow the seeds of the unfairness in our actions and I think that that is something that we all have to be cognizant of in regulation.

PATRICK CONROY: Let me give you a little push and pull with that, which is when we went from tick to decimals, that was a good thing, spreads closed. But part of a side effect of that was that limit orders didn't get executed quite as quickly because it was easier for people to compete with them. Okay, so what's the net benefit of that? Very difficult to figure out, but do you think that we should have stayed with ticks and not moved to decimals because it would have introduced some new inefficiency that's going to take time for us to figure out how to get around it?

LAWRENCE MITCHELL: No, of course not. Right, this leads sort of perhaps to the ultimate question especially given the changes in trading technology, we have seen over the last couple of decades, is it time to get rid of the whole floor trading system and the specialist system?

PATRICK CONROY: I think John Thain would probably be better at commenting on it. The New York just went to a hybrid system, and so maybe eventually that will happen. Certainly ECNs took over a large portion of the trading from Nasdaq.

LAWRENCE MITCHELL: Right, and if we did that, that would eliminate even the possibility of structural unfairness, and presumably from an economist's standpoint, smooth the market.

SHARON BROWN-HRUSKA: My view is that you let those things occur naturally, because these are fundamentally business decisions of the markets themselves.

PATRICK CONROY: The SEC's national market program never really got going by mandate, did it?

SHARON BROWN-HRUSKA: You can't think of all the possibilities of how a market operates because it is so complex. So, the idea that a regulator could design a market has always created consternation in my mind. I would rather allow the markets to evolve naturally toward a more efficient micro structure and that being electronic. It certainly is occurring in the equities markets and it is occurring rapidly in the futures markets as well.

LAWRENCE MITCHELL: Well let's take off on that a little bit and go to a question I have for you. I was interested to hear the way you cast your talk. I understand why you did, as risk management, basically model the way the regulators model. Be prepared for the increase the regulators are going to have. Be prepared to defend yourself by knowing how to explain or explain away the irregularities that you see. But one thing that I was thinking as you were describing what sounded to me like a wonderful internal compliance program is you could in effect, and I was only half joking at the end of your talk, you could in effect almost eliminate the regulators, if you could use that internal compliance program. What is the likelihood that such an internal compliance program would be preventive medicine rather than expose factor or risk management, so that the very knowledge that the system is in place have the potential to avoid the kinds of irregularities in the first place?

SHARON BROWN-HRUSKA: I think that's a very good question. It's funny, in my many opportunities to testify before Congress, I know that they would ask me, it's great you have these surveillance and monitoring systems but you only catch the bad guys after the fact. What can you do to prevent manipulation and fraud? And you are right. This type of self regulatory program, if you will, this internal compliance really does I think help business self monitor. I've been in NERA only a year, but I have seen that in a lot of cases companies are unaware of some of their trader activities. It's very competitive world to be a floor trader, or to be a trader of any kind, things happen rapidly, it's complex, the strategies are complex. Companies, especially senior management, need a mechanism that they can better monitor trader activities, when they are causing unusual pricing days, when they could be attaining market power that could unduly influence the market price and the efficiencies of the market, that could lead to

regulatory actions. I think it actually becomes almost a corporate governance kind of issue, it's very important to have those tools.

ROBERT MACKAY: Can I just add to that because I think in some sense the answer to Congress that the question they were asking you is the existence of the CFTC surveillance program, the existence of the NYMEX surveillance program, which does deter. I mean it catches some and you bring investigations, but it also deters others from doing it, just as I think, the type of program you have described, if that was applied and traders knew that the legal compliance department had that sort of information, it would probably discourage people who might otherwise be inclined to do it from doing certain things they shouldn't do. I think both at the government level and at the firm level that has a strong deterrent effect.

LAWRENCE MITCHELL: I never like to tweak economists, so I would like to follow that with yet another question though, and that is the incentives of companies to adopt this program. If the employees are compensated in the way that the cost of an occasional misbehavior is less than what they might make from misbehaving sufficiently and not getting caught, or the aggregate profits to the firm as such from kind of turning a bit of a blind eye to misbehavior, so that when you get caught, yes, we got a regulatory fine, we've got a penalties, it's a little embarrassing, but hey, everybody gets embarrassed at some point. Are the incentives really there to put in this kind of internal strong compliance, or are the profits from non-compliance too great?

SHARON BROWN-HRUSKA: I have great deal with confidence in the enforcement staffs. You believe that you have a very tough and aggressive mechanism to catch bad guys and if we don't catch them, we knew that somebody would report him in the competitive market realm. So you felt that that was really an important aspect that would help, that would -- and certainly if -- knowing that of course there have been many studies that say, less than I don't know less than 20%, get caught who commit wrongdoing. And maybe it's a numbers game, you know ultimately but I think that after Enron and after a lot of the terrible behavior that we saw, companies really have recognized how important it is to be on top of their trading program to operate in an ethical manner with high level and integrity in their trading and in their dealings with the markets, and in their dealings with their investors.

Maybe I am sort of over-optimistic but I think that there really is a desire on the part of most firms, especially in the energy area now given the occurrences that we have seen over the last few years, to really demonstrate that they've cleaned up their act and really take extra precautions to avoid the scrutiny of the regulatory authorities, which by the way is very costly. Responding to the legal and regulatory costs is huge.

LAWRENCE MITCHELL: Sharon, I am going to leave you with that optimistic last word on the state of corporate America, Sharon, Pat and Robert, thank you for sharing these presentations from NERA Economic Consulting's recent seminar. They were absolutely fascinating, and I can see why you have been asked to be with us today.

Again, I would like to thank NERA Economic Consulting for sponsoring today's program.

The Best of NERA 2007 is now archived in audio format in the virtual museum, so you can listen again to the discussion at any time. The transcript of the discussion as well as

the audio in MP3 format will be accessioned in the Online Programs section in the coming months.

The SEC Historical Society will resume its online programs this fall with the Fireside Chats on the Accounting Aspects of the Foreign Corrupt Practices Act. Please join us online at www.sechistorical.org on Tuesday September 18th for a discussion with Philip Ameen, General Electric Company, and SEC's Chief Accountant Conrad Hewitt moderated by my good friend and colleague, Professor Theresa Gabaldon from The George Washington University Law School. Thank you all again for being with us here today.