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USDA 2013 Agricultural Outlook Forum

February 21, 2013

PLENARY PANEL: MANAGING RISK IN TODAY'S MARKETS

PANEL DISCUSSION:

MIKE ADAMS, MODERATOR: HOST OF AGRI-TALK RADIO, WITH FARM JOURNAL MEDIA

BRYAN T. DURKIN, CHIEF OPERATING OFFICER, CME GROUP

DAVID BAUDLER, PRESIDENT, CARGILL AgHORIZONS

SCOTT H. IRWIN, LAURNCE J. NORTON, CHAIR OF AGRICULTURAL MARKETING, UNIVERSITY OF ILLINOIS

MODERATOR MIKE ADAMS: Good morning, everyone, and thank you for coming back in from the break. I note without the Ag Secretary and Joe Glauber and former Senator Daschle we have a few empty seats in the front rows. But for those hardcore folks here for good information in this session as well, we appreciate you coming back. It's been a great opening session.

My name is Mike Adams. I host the nationally syndicated radio program called AgriTalk, part of Farm Journal Media. I've been doing some interviews here today for my show. In fact, I just interviewed Joe Glauber, and I can assure you he told me the same thing he told you this morning, didn't change his story. Secretary Vilsack said the same story he gave us last year, so no changes there.

But we have a lot going on. These are amazing times. I've covered agriculture since the '70s, and I was thinking about managing risk that a lot of those years I've covered agriculture year after year we had corn prices around \$2.00, bean prices around \$5.00, and as I talked with farmers the feeling was "If we could just get grain prices higher, corn and bean prices especially, it would solve all the problems we have, and everything would be wonderful." We just found out, while there are a lot of good things that go with higher corn and bean prices, it creates a whole new set of problems as well.

It reminds me of the saying, "Now that I have all the cards in my hand, everybody wants to play chess." It's like, "Now I have what I thought I wanted to solve all these things, and now new dynamics and challenges and changes are affecting the game."

And that's why we're here to talk about it with three panelists that I think will give us keen insight in how we manage these risks, how we use the tools available to move forward in agriculture.

As a moderator, I will try to accomplish three things, lessons I learned from last year's presidential debates. I learned, as a moderator, the things I will try not to do. It was different than everything I'd ever learned about moderating panel discussions, which I do a lot of. But as I watched those debates the rules seemed to change; obviously, the rules

have become “lose control of the panel, be totally ignored by the speakers, and inappropriately interject your own opinions when nobody wants it.” So I will try to avoid all three of those things in our panel discussion here this morning.

We have a lot to talk about. Do futures markets we’ve come to count on still provide adequate risk management for our ag producers and market users today? That’s a big question.

And how do exchanges, customers, and economists look at these risks differently, and how can we manage them, going forward? We will talk about that in this session.

Let me introduce my panel.

Joining us from Chicago, **Bryan Durkin, who serves as Chief Operating Officer of the CME Group.** He is responsible for the products and services, marketing, research in product development, technology, global operations, and enterprise solutions divisions, as well as the company’s global offices. Bryan led CME Group’s global integrations following acquisitions of the Chicago Board of Trade and the New York Mercantile Exchange. His career with both CME Group and CBOT spans more than 30 years, and he’s a frequent speaker on financial markets.

Joining us from Minneapolis is **David Baudler who serves as Business Unit Leader and President of Cargill AgHorizons U.S.,** Cargill’s farmer facing grain and crop input business. He is also a member of Cargill’s corporate financial Risk Committee, and has held a variety of roles at Cargill in the U.S. as well as internationally after first growing up on a family farm in Southwest Iowa. Dave also serves on the executive board of the National Grain and Feed Association and the AGree Food and Ag Policy Advisory Committee.

Also, from Champaign-Urbana, Illinois, **Dr. Scott Irwin, recognized as a national and international leader in ag economics.** His research in agricultural marketing and price analysis, commodity market efficiency and speculation in commodity markets is widely accepted by other academic researchers and in high demand among market participants, policy-makers and the media. He has produced over 200 scholarly publications, is the team leader of Farmdoc, the award-winning extension program that provides comprehensive risk management information and analysis for farmers and agri-businesses in the U.S. Scott serves as the Laurence J. Norton Chair of Agriculture Marketing at the University of Illinois where he teaches courses on commodity price analysis and futures market research.

[Applause]

We will have opening remarks from each speaker, and then discussion, some questions I’ll pose to each panelist, and at the end we will open to questions from the audience. To get started, please welcome Bryan Durkin, COO of the CME Group.

[Applause]

PRESENTATION OF:

BRYAN T. DURKIN, Chief Operating Officer, CME Group

MR. BRYAN DURKIN: Well, thank you, Mike. It's a pleasure to be here today speaking with you about this extremely important topic. I'm Bryan Durkin, chief operating officer of the CME Group. We are the world's largest derivatives marketplace, and we feature a variety of futures and options contracts of many asset classes covering a wide spectrum including: energy, interest rates, equities, and foreign exchange. You might recognize us for what we've been known for the longest, a marketplace for trading agricultural commodities, something we are deeply proud of.

I'd like to discuss the ways this marketplace is changing in the face of new global challenges and the role agricultural markets play in meeting these challenges. Our markets in Chicago were formed 150 years ago because farmers needed a central place to manage their risks of doing business, a place to guard against wild price fluctuations and demand for their product.

We have a special tie to agriculture in our company's history and it's embedded in our culture. Because of this we understand that efficient, transparent markets are essential to the business of farming and offer farmers and ranchers the opportunity to manage the risks of unpredictable events we'll talk about today that are a major part of their business.

We provide a mechanism for price discovery, which allows the agricultural community to make informed business decisions based on current market data. Technology, economics, regulation, weather, weather patterns, geopolitics are a few factors consistently weighed in our markets every day to determine the dollar value of corn, soybeans, oats, livestock and many other commodities.

Over time farmers and agribusiness have increasingly used our markets to manage risks. We see this growth every day, especially following wide adoption of electronic trading. I'm showing you a perspective of what's happened in a short period, a representation of corn and wheat markets that shows through introduction of electronification 10 years ago we averaged a few hundred thousand contracts a day in the markets; as we've introduced our global network and the electronic trading and increased to a wider asset class we average over 600,000 contracts combined in a deep-liquid, open-interest pool of several million contracts.

We don't have to look far to see how this benefits the agricultural business sector. Last year we had one of the worst droughts in decades which affected 80 percent of U.S. agricultural land and reduced production levels of corn, wheat and soybeans and resulted in record prices. We play a crucial role in helping companies manage the prices they pay for grain, which allows them to pass fewer costs on to customers at the grocery store. Farmers, ranchers and grain elevators look to exchanges like ours to serve as a safety net,

a way to lock in a price for their product so they can increase their gains and limit losses and to continue planting the next year.

It's not only agricultural commodities, but any company that depends on the use of materials or instruments with fluctuating prices benefits from managing risk, and that's what futures markets allow them to do. Airlines, steel mills, pension funds, banks, countless businesses rely on our markets to hedge against rising and falling prices. CME Group does this by trading across asset classes on a single exchange from almost anywhere in the world.

When companies can manage risk, a nation's economic health is helped when companies can stay afloat even in the most turbulent of times, and the past year was a turbulent for many food producers. Markets are essential to any business, and business can't serve their function if they aren't fair, reliable and trustworthy. That's our challenge we face across the globe since the financial collapse of 2008. The economic regulatory environment we're in, matched with technological challenges and waning trust in the financial industry and you can see how the new environment of trading is affected. The focus of financial firms now is to restore trust and bring confidence back to the marketplace.

We faced this ourselves following the MF Global and PFG failures and implemented several measures to ensure safety of our marketplaces so as to increase accountability and transparency. We developed a fund for eligible farmers and ranchers hurt and this past year we've helped more than 200 farmers affected in 27 states, but the goal is to create a marketplace where this fund is not necessary.

We've seen market participants react to the current situation in financial markets by deleveraging positions and trying to free up capital, seen in lower trading volumes across equity and commodity markets in 2012, which is four years after the financial collapse. Market users must have the confidence that the financial industry is improving and adapting, becoming more efficient and reliable, especially in the liquid markets like ours where more than 3 billion contracts trade a year and represent more than one quadrillion dollars value. This value underscores the vital economic role played by our industry.

The macroeconomic trends that impact us include the level of electronic trading. Market participants, through accessibility of our platform in over 150 countries, increase vibrancy, liquidity and depth of the markets that represented in the 1980s approximately 1.8 million contracts; but today we provide deep liquid markets representing over 12.5 million contracts and 81 million in open interest.

When we hear news lately of electronic trading, it tends to be about the problems we've seen last year with sudden dramatic price drops in equity markets like Knight Capital. Or it's about the rise in high frequency trading and whether it's good or bad for markets, and we believe it's a critical liquidity provider, but what's most important regardless of platform is complete market ecosystem that includes soundness, safety and liquidity, integrity and transparency.

At CME Group, nothing is more important than the integrity of our marketplace, and it's why we ensure our markets are structured to promote fair, open access to all participants whoever, wherever, or how much they trade. Our markets include risk management technologies like stop-logic, a critical tool used in limiting potential for disruptive market moves and one of dozens of automated safeguards we use to protect our customers. The equity markets are poised in April of this year to implement something similar to what we've introduced.

New regulatory proposals and not-yet-finalized Dodd-Frank rules have also introduced uncertainty, and nowhere is this more true than position-limit rules which have potential to affect the agricultural community. The finalized CFTC rules were vacated last fall by a federal judge, and the CFTC appealed and we await the next step. Challenges to regulators are to provide genuine consumer protections that do not impede sound financial market development.

Despite these trends of wary market-users, increased electronification, and changing regulation, the fundamentals of the markets remain the same, still a place for price discovery where risk can be managed in a transparent and liquid environment.

The role of the American farmer has changed in recent years, and the epicenter of the global economic growth is shifting from developed nations to emerging economies whose middle class provides for American-produced economies. This slide of the staple corn shows what's occurred, the factors affecting volatility in food prices, i.e. weather, government policy, global demand, development of biofuels and biofuel policy, limited farmland, macro-economic factors, declining grain reserves, and geopolitical conflicts. Good risk management can help reduce cost of food on the shelves here, but a drought like last year's has far-reaching consequences for food security around the globe as well.

The USDA estimates food prices will rise 3 to 4 percent this year alone, and more for the meat and dairy product industries. The UN's Global Food Price index shows steady increases last year following the drought, which underscores the importance of grains produced in the U.S.

Some of China's demand for food with the growing middle class is shrinking, and higher prices for U.S. commodities shrink exports, which can exacerbate the uncertain situation for farmers. Lately, prices have come down, and corn and wheat traded on our markets dropped 20 percent from their highs last summer, but new demands from China, India, Iraq and Bangladesh, and USDA projects by 2022 developing countries will account over 82 percent of world population and demand on U.S. agriculture production will increase. Technology, infrastructure and access to capital will play a major role to answer the demand for higher yield and increased productivity, but risk management underpins all of it, the ability to lock in a price on liquid, transparent commodity markets. Risk management is a critical resource farmers have relied on for over 150 years.

Transparency is one of the most important values our Exchange can offer. In agricultural markets, the USDA provides a tremendous service through its research and reporting of agricultural data. This helps markets retain transparency and integrity; it helps regulators, policy-makers, industry leaders, markets and market participants do their jobs better. Markets take a multitude of factors into account when determining prices, and without the USDA reports would not be available.

Thank you, and I'll turn this over to Dave to talk about things from Cargill's perspective.

[Applause]

**PRESENTATION OF:
DAVID BAUDLER, PRESIDENT, CARGILL AgHORIZONS**

DAVID BAUDLER: Good morning. I want to thank the USDA Ag Outlook planners for a chance to address this important topic of Managing Risk.

Risk management is core to Cargill, a core competency we pride ourselves on as a company, and what you will hear from me today about its importance for our customers.

AgHorizons is the farmer facing part of Cargill, so the perspectives you will hear won't speak for the farmer but of the relationship we have with them to manage risk at their level. We also have demand customers that use these products who always ask us for ways to manage their risk, so it's an important role we have in doing that.

A little about Cargill AgHorizons, we're one of 70 business units Cargill has, we service 50,000 customers/farmers in the U.S., and we have a 1,600 member team and over 100 grain elevators throughout the U.S., mainly in the Midwest in the production areas of grains where our team works with farmers. We have a crop inputs part to work with farmers to manage their fertilizer, crop protection needs, and we have a crop insurance sales agency where we sell crop insurance to farmers. So we are involved in a lot of things that USDA looks at and has input on.

I want to talk about some things you heard this morning about supply and demand, world production, what's going on at a worldwide level, and what the price impacts are and opinions on that to stimulate some questions from the group.

Here is population growth. In 2011 we had 6.9 billion people, and by 2050 we could be 9.3 or 9.5 billion to feed. Compound that with growth in GDP per capita, and as economies improve worldwide that is the multiplier effect on demand for products grown here and worldwide.

In response to this, you can see production '75 to now is up 98 percent. And you see the last year production decreased due to the U.S. drought, but this is a worldwide view of food production—and it's growing.

The right chart shows yield impact of crops is doing most of the work. We have some area has grown since 1975, as crops go in and out of production for CRP and other parts of the world expand production areas. But use of technology and agronomic practices by farmers in the U.S. and worldwide contributes to the bulk of growth of production throughout the world.

So when you put production together with consumption worldwide, you see two things going on: the trend line shifting up and to the top, which is the compounding effect of the improved standard of living throughout the world with growing world population. You see consumption growing, and this chart is no big deal, is it? Production is keeping up with consumption, it's not a problem. But in the next slides, the underlying production as the line grows for worldwide needs and productions, small deviations in productions year to year and the impact on stocks draw in different parts of the world have a very large fundamental effect on the market and therefore a large effect on price.

So another way to look at world stocks, here the blue line represents ending, absolute stocks worldwide, and since 2008 we've seen a draw on those. We often look at stocks-to-use ratios, so as these come down that creates more demand on the marketplace and usually a price reaction. So in a world production of 2.7 billion metric tons, a change of only 100 to 200 million metric tons, a small percent of total world demand picture drives stock-to-use from a 30 percent of ending stocks to only 15 percent of ending stocks. So this is what you see in the marketplace, as these things happen and stocks are drawn and governments worry about sustainability and feeding people, they buy ahead. We'll get into how price reaction happens as a result.

A couple things that gone on in U.S. wheat stocks versus price, you see the big spike in 2007 of prices, and ending U.S. ending stocks of wheat relative to average prices going on. We had a stocks draw from '03 to '07; we got to lowest-ever wheat stocks in the U.S., and on the heels of that we had a world production problem, problem in Argentina, in the Black Sea, the Ukraine that compounded the problem, and the world needed to draw U.S. stocks, and the price reaction was dramatic. As the market came to the U.S., we had a 300 million bushel change in wheat stocks. Stock draws got accelerated in the marketplace because at the same time we had reduced productions and government intervention worldwide coming in and building stocks that compounded the effect. At a time when we didn't have enough stocks to take care of the world, we also had the world interjecting themselves in building stocks to be secure.

So an 18 percent change in ending stocks from 2009 to today created a 60 percent change in price. The takeaway from these slides is, smaller changes in production worldwide drive fundamental price changes when world stocks are low.

You know about the drought, but with regard to corn stocks versus price, you can see in '04 U.S. production was 10.8 billion and generated ending stocks of 213, pulling on stocks through 2012, the drought year, a 13 percent change in U.S. production; although Brazil in dollars this year will play a major role in worldwide exports as U.S. corn

production satisfies U.S. needs. It generated a 29 percent change in stocks, 13 percent change in production, and created a price change of 250 percent.

So how do we get prices to go up there when we do that? This is the marketplace reaction incenting production, so farmers today we deal with and their adoption of technology and how they use it at variable rates to maximize yields and, more importantly, maximize returns in addition to yield. So we have very sophisticated farmers looking every day at returns just as many look at their business.

So what's the reaction to land prices when you have grain prices go up 250 percent? This chart shows an Iowa state statistic, and we see Iowa land values increased dramatically as a result. So high prices create high prices for land and high demand by farmers to acquire and farm land because their returns are very exciting.

This morning when you heard the forecast of what could happen next year, with an average crop we'll have a very different marketplace this year. An average crop that gets produced and the impact to farmers that own land—certain counties averaged over \$12,000 per acre, and we've carved out events of over \$20 to \$25,000 per acre where land is currently being acquired. Rental prices have gone from \$60 an acre to \$400 per acre in some areas.

So who needs to manage risk now? The farmer. So if a farmer signs a contract for \$400 an acre for their land rent and doesn't have a way to mitigate the risk by using commodity markets and to buy crop insurance and buy forward fertilizer and inputs, he has a problem. So with this liquidity and transparency of market, a farmer's ability to execute through us and others on his own, the farmer's risk profile in the market is very important. Access to tools to managing risk is something we are passionate about and we think is in the farmer's best interest, and we see farmers every day adopt these type of risk mitigation tools.

We sell crop insurance. The farmer plays a role in this with out-of-pocket money they pay for that insurance. The money they pay is either risk if it's money that's gone they may not recoup, one way to mitigate that risk is to forward contract today's grain prices that are high historically against at least the portion they spent on crop insurance and crop inputs like seed, fertilizer and crop protection. These are the things we think are important and we think the liquidity present in the markets is needed for the farmers.

We use these products as well, so I don't want to say 100 percent of everything we do is for them. We accumulate grain as our core business in a time when there are surpluses in the marketplace where the market doesn't currently demand at the destination at that time. We take on some of these. We use futures markets as a hedging tool against that to mitigate our risk because these are risks we don't think the flat price orientation of buying 30 percent of a year's crop and storing it hoping the market goes up is not our model. Having a hedged model where we can have an opinion on the market on where we think the direction will go but hedge the grain we buy and have access to these markets are a way we manage risk. We have a few programs now where the farmers

have come and asked us to manage their risk. We have pro-pricing tool out there where farmers ask us to make the pricing decisions on the futures component only of what they sell us. We think this is a value-add. Our customers tell us this is a growing contract, and this is how we play a role in the marketplace to bring some of our expertise to bear on what the farmer does.

These are things for you to think about when you ask us questions, interact with farmers, think about ag policy as we go forward, that we think are important—and the transparency of markets and the need to do that.

Thank you for your time.

[Applause]

PRESENTATION BY:

**SCOTT H. IRWIN,
LAURNCE J. NORTON, CHAIR OF AGRICULTURAL MARKETING,
UNIVERSITY OF ILLINOIS**

SCOTT H. IRWIN: I have the good fortune to follow two excellent presentations. Thanks to USDA for putting this panel together and giving me the opportunity to participate.

I want to talk about one of the major headline issues relating to confidence in our agricultural futures markets. This story begins with the huge spikes in prices that we saw first in 2007, 2008, and then again in 2010 and 2011. I presume everyone here is well-aware of these spikes. But what's behind those spikes is the subject of intense interest by market participants, regulators, people inside the USDA forecasting these markets, and of course traders themselves. There has been significant discussion of the role of a new participant in our agricultural and broader commodity futures markets—financial index investors.

The charge has been that These new, in the words of Bart Chilton of the CFTC, “massive passives” simply overwhelmed the normal supply and demand functioning in our futures markets, and this led to very large bubbles, so those spikes would not have been nearly as large without the activities of these new financial index investors.”

You can see on the slide I used a shorthand term for this charge, which I call the “Masters hypothesis” after hedge fund manager Michael W. Masters. It's interesting that it's a hedge fund manager that has led the charge that these new forms of financial investment have dramatically distorted our agriculture and other commodity futures markets.

There are two keys I want you to take away from this chart. First is, the idea the new way of financial index investment in our commodity futures market caused a massive

bubble in prices; in fact they are a major driver of those spikes. Take your pick: the market was overvalued by 20, 30, 40, 50 percent, so it's a huge overvaluation.

The second key, that overvaluation relative to fundamentals was very long-lasting, measured in months if not in years.

Of course if that is correct, then concerns about the pricing efficiency and the signals farmers could get out of our agricultural futures markets would be brought into serious question. This would be a very serious indictment of the operations of these important central market mechanisms.

So whether this hypothesis is true or not is a very important public policy question today, and as Bryan mentioned the CFTC has proposed new position limit rules in an effort to rein this process in.

So are those new rules really needed? I argue that I can refute the Masters Hypothesis in two slides.

This slide shows, in the CBOT wheat futures market, the dashed blue line shows the financial index investor positions in wheat. You can see their positions relative to the 2007 and 2008 spike in wheat prices actually peaked in mid-2006 and then were declining throughout the dramatic run-up in wheat prices in 2007 and 2008, represented by the red line. It's hard to square the Masters Hypothesis with reality when in fact the positions of these kinds of traders were going in the opposite direction of price. Very simple logic.

Second chart I'd present is a scatter diagram showing the relationship of changes in the index trader positions in the CBOT wheat futures market, with the returns or the price changes. That's as close to a scattershot as you'll ever see statistically. There is no correlation.

And I'd summarize by saying, we've not been able to find a smoking gun. I've done a lot of studies in this area, sliced and diced the data in numerous ways, and the answer keeps coming up the same every time: "no relationship."

But don't just take my word for it. I'm just one of the participants in this large public debate. This was a policy brief that came out of Germany in December 2012, and these four economists as I know had not written anything themselves, but they provided a terrific summary of the state of the evidence on this important question related to our current futures markets.

I'll just read their summary statement: "The current state of knowledge indicates only a few and weak findings that verify the assumption that the rise in financial speculation in recent years has increased (1) the level or (2) the volatility of agricultural commodity prices. Seen in this light, the alarmism about financial speculation should be classified as a false alarm. Those who desire to effectively combat hunger in the world have to take

real economy precautions to ensure that food supplies will match the envisioned increased demands.”

They reviewed over 35 studies to reach this conclusion. So the evidence is overwhelming. The science is overwhelming on this question. So I’d like to exhort us to finally put this controversy to bed and realize it’s been a grand unicorn hunt for a mythical bubble-causing investor in our agricultural futures markets that does not exist.

So you might ask, that seems a little bit harsh, and if the evidence is so clear why so much controversy? I have asked that myself frequently over the last five years as I’ve taken a look at the evidence. I think there’s actually a relatively simple answer to that riddle.

After countless media interviews, presentations, debates, appearances on all sorts of talk shows debating these topics, I think it comes down to just one simple misunderstanding about how our agricultural commodity markets operate. And Dave actually set it up perfectly, and said it much more eloquently than I will, but it has to do with the pricing relationships in storable commodity markets. And I am a professor, so you have to have at least one supply and demand diagram per presentation, so this is my required slide.

But the one question I’ve gotten over and over as we’ve dealt with this controversy is: “If it’s not the index investors, how can you convince me the price fluctuations in these dramatic spikes are warranted? What explains it? They just seem to most people to be too large to be explained by fundamental supply and demand factors.”

And behind that, I believe, hardwired into the human mind is a search for linear, straight-lined relationships. And in our commodity markets, pricing doesn’t work that way. And this chart is just a simple demonstration the way economists have discovered these markets really work. Basically when you have a large amount of stocks on hand, a given reduction someplace in the world doesn’t cause a very big change in price because you have the stocks available as a shock absorber, and that’s the kind of price changes you see on the right hand side of the chart. But let’s say for some reason you’ve been drawing down stocks as we’ve been in the last five years in the world, dramatically so—you get into a situation where those stocks as shock absorbers are no longer available and now when you have a given surprise reduction in supply someplace in the world you have to convince you and I to reduce our current use. There’s no shock absorber to draw from inventories, and since the demand for food is highly price-insensitive it will take large price changes to convince you and I to consume a little bit less food.

That’s why we have this nonlinear relationship for prices that I think are widely misunderstood. Every grain trader in the world lives by this curve and understands it, but I think that’s fundamentally a major education job we have in front of us.

Before I finish, I don’t want to imply that absolutely everything is perfect with our agricultural futures markets today because there have been as Bryan and Dave mentioned, significant changes in the marketplace in the last decade. The way I like to

put it, if you could have magically transported a floor-trader from the late 1800s from the Chicago Board of Trade and parachuted them into the pits in 1995, I suspect they could have just picked up a card and started trading again. Not that much had really changed: the players, the way the trading occurred had not changed that much.

I believe we've witnessed more structural changes in our agricultural futures markets in the last decade than in the previous 150 years combined, and this is a list I've come up with. There's the shift to electronic trading which is an enormous change in the way these markets operate; the rise of online discount brokerages; and the ability to trade in these markets is phenomenal how easy it is to open an account online and begin trading; index investment I already mentioned; exchange-traded funds create another way for public and large institutions to participate in these markets; we've heard a lot recently about high frequency trading, which is related to electronic trading; and something I know USDA has been recently been grappling with is the real-time release of government reports.

We could add a lot more to that list, but my point is, there are legitimate reasons and points of debate about the efficiency of price discovery in our modern current agricultural futures markets. But what we need to do is get the focus off the mythical bubble-causing index investors with the unrealistic focus on huge, long-lasting bubbles and narrow our focus of a research analysis to the impact on how well our markets are functioning in terms of discovering prices over time intervals of, say, seconds to maybe as long as days. This is where we need to focus; these are real questions and where real people operate in these markets.

The basic question is very straightforward: Are prices being discovered in our agricultural futures markets more efficiently today as a result of these changes, or less?

My own personal expectation is that the answer will indeed be, on average yes, these changes have improved the efficiency of price discovery, but not without some real bumps in the road and some real need to evaluate carefully what kinds of new regulations and rules need to accompany these dramatic changes.

So thank you very much.

[Applause]

MIKE ADAMS: Thank you, Scott – and all of our panelists. For sake of discussion it would have been a lot better, Scott, if you'd got up there and said "there's a real conspiracy going on here," and you found all kinds of sinister things going on manipulating the markets. We'd have had a lot more lively conversation perhaps if you'd done that, but instead he took the myth-buster role.

I was thinking, listening to all this, how far we've come from the days when managing risk meant how to deal with stockpiles of grain and how to deal with trying to get farmers

not to grow so much. How many remember those days? In a way they seem like a long time ago, and in some ways seem like just yesterday, so a lot has indeed changed.

In just a moment I'll let you ask some questions, but I want to kind of get the conversation going here, and we'll start with the "drought" word. How many times do you think you've said or written the word "drought" in the last year? I wonder what the over/under is how many times more or less right at this compared to last. It's certainly a big part of our vocabulary and the risk we're all here to talk about.

First, I'll get this out of the way: Bryan, one more chance, do you want to announce the new trading hours will be? You won't do that today, right?

BRYAN DURKIN: That's right.

MIKE ADAMS: He's not going to do that. So I thought I'd save you asking that question later. I've already asked him that in an interview and he wouldn't tell me then, so we still don't know for sure what their decision is on trading hours.

Let's get to the drought. Let me throw this out to our panelists. Some parts of the country, especially west of the Mississippi, still are very much dealing with the drought. It's a little better now east of the Mississippi but still the lingering effects of the drought no doubt are carrying over into this year. How do producers go about, do you think, managing potential weather impacts this year? Especially, coming off last year farmers are tempted maybe to say, why should I lock in a price? Last year it was better at harvest than what I'd locked in earlier in the year." So how do they manage this, going into this year? Bryan?

BRYAN DURKIN: I think as we each spoke today, there's a variety of risk management tools that factor in and when you look at what occurred over the last drought it's by far the worst we've seen in decades. However, the market has recovered in the context of having these various risk management tools that each of us spoke of today. From our perspective having the controls and effective products in place in the futures market as a tool for our farming and agribusiness community to manage those risks, the marketplace demonstrated it did exactly what it was designed to do, given the difficult and volatile conditions that were occurring. I think having the appropriate mechanisms in place to ensure the integrity and performance of that market price is fundamental to that efficiency.

DAVID BAUDLER: I'm in line with that. The only thing I'd add is, this points out the need for the farmer to be able to access these markets to manage that risk. As they are locking their rental price, buying their crop inputs of fertilizer and seed, these are not insignificant costs. One way for them to look forward is to hedge a portion of that either by new crop selling of cash grain or by the futures component of that in the market. So having that ability.

What makes it hard today is that everybody assumes it's average. You can see early

rainfall is not indicative of final yields. We'd say that's true on average, but the reality of the situation is we have farmers in western Nebraska today that are not putting fertilizer on at their normal rate today because they don't have the moisture. They didn't do it in the fall, and they're waiting for spring to see what it brings.

So we don't know what '13 is going to be. If we knew exactly what '13 was going to be and if every farmer knew that and if all of you knew that, you wouldn't be here. You'd be in the Bahamas with your own positions in the market.

I think we'll have to see what the crop brings. It is a concern. The East has recovered well from a significant drought, but we really need the West to come in. Even with crop insurance and these risk management tools, I guarantee farmers like to produce grain. That we're sure of. So hopefully we have that chance in the West, and we'll have to manage another drought if that's what hit us. Last year conditions were perfect. Our S&D said we were going to have a bin-buster and we didn't know what we were going to do with the stocks. And it turned around very quickly over about a six-week time period with very high temperatures and very low moisture. So things can change; they always do.

SCOTT IRWIN: In our work at University of Illinois we emphasize first making optimal use of the partially subsidized Federal Crop Insurance Program. We saw, last year in the drought, how dramatically important that was in cushioning the effects of the drought for so many producers. Probably a reason we didn't see the usual catastrophic risk response by Congress is because the Crop Insurance program was in place.

I think continued use of the Crop Insurance is the starting place. Prices have been fairly attractive so some higher degree of forward selling in these markets this winter and last fall was prudent, but as I showed on my chart when you're in the situation where stocks are so low to start with the main watchword in risk management is "flexibility," because as Dave said "things can change very dramatically." When those conditions change, price movements can be explosive. So one just has to be nimble and flexible.

MIKE ADAMS: We hear so much about growing world population, we have tight stocks, we hear about food insecurity. Do you see this being an opportunity or a risk for North American producers?

DAVID BAUDLER: Yes. Both. Opportunity is always relative to what the other farmer got in the coffee shop, to what they got in previous years. We now know that opportunity to capture the current price move, even though we've set back 20 percent from the highs there is still a good return at current input costs into agriculture, so there is the opportunity for them to capture that and for that to go forward in today's environment. I think that's the opportunity. And there's some protection via crop insurance if they are unable to produce they thought. This is never a recommendation for 100 percent of sales of everything. That's never a good strategy. But I think a good strategy is knowing their costs. Every farmer we deal knows their cost of inputs and production and what return they need. And on a portion of their crop it's a great opportunity to do that.

The risk is, you sold it lower than your neighbor or the other company, so it's both.

MIKE ADAMS: Then you can't go to the coffee shop because you're too embarrassed.

DAVID BAUDLER: Just remember the one sale and not the other. That works.

SCOTT IRWIN: Overall, I think you have to view it as an opportunity, particularly when you take into account the dramatic changes in the fundamentals of our agricultural markets due to the rise of the use of grains as a feedstock and as a fuel. This creates I think a substantial safety net under our current markets. Exactly how high is debatable, but that's my view. I'm relatively optimistic.

BRYAN DURKIN: I'd echo that and say it's an opportunity but there's a number of excellent risk management tools to protect against the risk we've alluded to. From the perspective of crop insurance, use of futures contracts, ability to have market activity and daily settlements and accelerate payout period associated with a futures contract, use of options as an additional safeguard—there are a number of mechanisms in place to position yourself well for that opportunity.

MIKE ADAMS: If you have a question raise your hand and we'll get a microphone to you. We've got one down here, another down here.

QUESTION: David Lambert. Looking at the food price spikes of 2008, in view of your analysis that financial speculation had little to do with it, could you share more on how you assess what the true causes were and which of these causes had the greatest impact?

SCOTT IRWIN: There's a lot of work, not just myself, I'd base this question on. I think the two most significant factors are the rise in ethanol production in the U.S. The way my friend Bryan Wright says it. Who wouldn't be surprised that we'd have the spike in 2007 and 2008 if you were to tell someone the United States was going to have droughts reducing the amount of corn for food uses by one-third every year forever seemingly. How could this not create a very dramatic spike in corn prices? So I simply think that's the number one factor. The second one is on the oil seeds demand is the enormous increase in Chinese demand for soybean meal for livestock rations as their economy has grown and they have wanted to eat more meat. That's been an enormous growth. Those two things are the primary factors.

The third one I'd add would be just like in the past for unknown reasons bad weather events tend to cluster, and we have had, particularly in the U.S., much less favorable weather conditions than we had in the previous 10 years. That's my top three list.

DAVID BAUDLER: I'd start where he ended, which is around weather. I think weather was the primary driver. It gets compounded by government interventions when different countries decide to build stocks, to build food security in their country at a time when the stocks aren't really there. So I think some of those interventions, part of that move you

asked about was also because exports were banned from countries in other parts of the world, and anytime those interventions come into play it exacerbates a fundamental problem. The market anticipates as well, so whether it's the speculator, the farmer, people in the marketplace that are short-term or long-term trading, the market anticipates what they think is going to happen. That's the way these markets work.

So you can see it run faster and harder because you have more participants anticipating a problem or responding quickly to a problem that eventually will solve itself. But the solving of it is by price, is at least one theory. That price reaction to a fundamental problem that got accelerated can take some time to work itself out

BRYAN DURKIN: I'd add that the third slide I presented that showed the corn, there's a multitude of factors that add into the development of pricing during that timeframe. You heard weather, geopolitical requirements, export demands, our own governmental policies, a multitude of factors that flow into that discovery and the determination of the price. With respect to the speculators themselves, we've done studies that demonstrate the great liquidity that's been provided by those entrants into these markets so you can consistently rely on very deep, liquid, tight bid-ask spreads 24 hours a day as a result of that contribution factor.

MIKE ADAMS: That's interesting because you talk to folks in the countryside, say the word "speculator" and it has a negative connotation. Bryan, you say the positives of that speculation perhaps get overlooked?

BRYAN DURKIN: Absolutely. Without the speculator in the market, I firmly believe you'd see a widening of the spread between where you can buy it and sell it. Having that consistency of liquidity in the marketplace is what enables us as an industry to be able to come to a market and have it at the tightest bid-ask.

DAVID BAUDLER: I'd also say speculators have been around for a long time, so they used to manifest themselves in the pit and people took a position for a minute, an hour, a week, a month, people actually in the pit providing that liquidity. So they've always been an important part of the market to provide that liquidity. We often find when we hedge our own grain or farmers' grain, they are on the other side of our trade, that proves there is liquidity provided by having those people in the marketplace to be able to do it. It's transferred itself a bit in how we talk about them with the electronic trading. It's no longer someone that hasn't seen if they've not gone to the Chicago pit; it's now someone who's sitting at a computer and that gives us a different feel for what they do today, but they are performing the same function.

QUESTION: I'm with the Farm Credit Administration. Given the increased participation of some of these large trading nations, mainly what we used to call the centrally planned economies—Russia and China—the fact they can come and go out of that market very quickly can cause price instability, can you envisage another tool? We have crop insurance. Could there be something like country insurance, against that kind of volatility?

SCOTT IRWIN: That would be I think a form of political insurance because in those countries I think the most salient example is the export bans that we've seen out of Russia, and if that's a insurable risk I'm sure the clever folks at the CME will figure out a way to cover that risk if it's one there's a demand for. But that same kind of risk can be in some form hedged against by taking positions in futures and options too. And in some ways that's one way people hedge their positions when that might or might not occur.

DAVID BAUDLER: I just quoted China's role in the market, so on oil seeds they've gone from less than 10 percent of the world trade flow on soybeans to over 60 percent of the world trade flow on soybeans in recent years. I'm not talking about 60 percent of the total demand but 60 percent of what moves from country to country throughout the world. Yes, that has been a big change. Fundamentally they have more people starting to adopt a higher standard of living, so they can turn things on and off a bit relative to their own production short-term. But they now have a demand base that's been built that I think will continue. So there can be short-term reactions that can do it in a country like China. That is very different than the example of government intervention by shutting off exports out of a country once things are already tight. That has a different effect. Are there tools out there to do that? There's multitudes of tools, either that probably rolls itself into a foreign exchange reality that comes out of that. So there's lots of tools out there to manage those risks, but I think we can't lose sight that hedging corn relative to growing corn is a very fundamental risk. There's a fundamental risk management tool, and if we go too far into the derivative of the derivatives it will be very complex for the marketplace to manage. That's one opinion anyway.

MIKE ADAMS: I like the idea of a political insurance policy to protect us from harm done by our politicians. I think that would be very popular if our insurance agents could sell us those.

SCOTT IRWIN: Mike, you may regret using that phrase.

QUESTION: Rich Feltes (sp), R. J. O'Brien in Chicago. A question for Mr. Durkin. As you know, the CFTC is going to vote within six months on the so-called residual interest rule which effectively would double the margins in anybody trading a futures contract, and will have serious implications on producers. This has not been authorized anywhere in Dodd-Frank, and doubling the margins would not have prevented the recent failures we had in FCMs. My question is, what is the CME's position on this? What are you doing to try to stop it, and what happens to volume and liquidity if you can't stop the CFTC?

BRYAN DURKIN: First the residual interest initiative you outlined was part of a 450-page proposed rule submission on behalf of the Commission that addressed a myriad of issues on customer protections. A number of those principles we supported as part of the CFTC's initiatives because it underscored and ratified some actions we already took to preserve customer protections on segregated assets. On residual interest and increased margining that might be associated, we are very concerned and have communicated with

the CFTC participating in roundtables on this very issue working closely with the Futures Industry Association to express the concerns of what we believe would be unintended consequences to impose such a requirement. We feel this could have very negative dampening effects to the liquidity and effectiveness of the operations of these markets and how segregation has effectively operated over the years to provide the efficiencies of these markets.

We have been working closely with the industry to address this.

QUESTION: Julio Alsair (sp) with WGC in Chicago. How has drought-resistant seeds changed in the market? What type of trends do you see drought-resistant seeds going in the next year or two if the drought trend continues in parts of the Midwest? For the CME side for weather derivatives, how could a farm or a trader manage weather derivatives to protect their farmland from another terrible drought season?

SCOTT IRWIN: This is an area of very active debate among crop scientists and others, in particular for corn, GMO varieties with the stack traits in particular, much more drought-resistant than the varieties that proceeded these stack-trait hybrids. My own view from the research we've done is that while that technology has certainly contributed to our continued growth in trend corn yields that their impact in terms of drought tolerance is fairly small. Evidence of that, we have a crop weather model we use; and our predictions with that model based on data for the last 50 years were too high without taking into account any changes in trend to drought tolerance.

I don't think the evidence is very convincing that our current hybrids have that much better drought tolerance than they had, say, 50 or 20 years ago. We may have seen a bit of an uptick in the rate of growth in corn trend yields, but I don't think it's been large. We're not going to get to 300 bushels per acre anytime soon. On the other hand, science does progress, and I think you can be more optimistic as you look further down the road with some of the genetic technologies are in the laboratory and starting to be field tested, that maybe we can see some more progress as we look down maybe a 5 or 10 or 15-year horizon.

The problem with drought tolerance is that it's incredibly difficult to pinpoint the changes in the plant to make it more drought tolerant because like last summer if you get a two- or three-week blast of scorching heat at just the wrong period, and that's not the time period you timed your drought tolerance characteristics in the corn plant, it's worthless. But it's very hard to make a general change in the plant genetics that will make it more drought tolerant.

DAVID BAUDLER: There is some technology out there, so it's coming out. It's adopting; you hear statistics around 6 bushel per acre, 10 or 12, depending how you do your math, yield increase when in drought-stricken areas. Like many technologies that come, it will come. I think they will figure out a way to do it, and it solves two things at one time. It solves a growing need for food and it solves the water resource relative to that growing need for food. So if it can get done and be effective, I'd say it would be

good. What you heard this morning regarding to synchronous approvals worldwide are a big deal for the industry and making sure as we roll these products out are able to use those and access markets worldwide that want to take them. I'd say as these new things come out there will be a lot of dialog about how fast and where they're adopted and how we do that all towards an increase in technology.

Remember the yield chart, and without that we'll have a hard time feeding the world.

MIKE ADAMS: We have time for one more question.

QUESTION: I wanted to go back to the point made about the CFTC appealing the decision against their rulemaking on position limits and ask all the speakers if their organizations have supported or opposed that initiative and if you think the CFTC and their staff has been sucked into the myth that was presented on this panel? Or did they have legitimate concerns?

BRYAN DURKIN: I'll start. We were pleased with the court's initial decision and feel those types of decisions are best left to the marketplace, the Exchange itself and products it represents to be able to manage those types of decisions. As to the CFTC's position, we feel strongly about the positions we've taken to date.

DAVID BAUDLER: We align around an approach where people are able to execute in the market what is fundamental to the marketplace within those limits. But we must make sure we allow access to the market by people who want to participate, so it gets down to *how* rather than a yes or no on position limits, how those are implemented and manifest themselves to make sure we don't have a runaway train. We don't want the market not to work, and we need to allow those participants in as much as we can.

SCOTT IRWIN: I can be freer in my comments as University of Illinois doesn't take any positions in these kinds of debates. I personally submitted comments on that rulemaking, arguing the scientific evidence just isn't consistent, haven't been able to demonstrate there is a compelling case to be made from the evidence that these financial index investors, speculation more broadly, is causing unwarranted changes in price. That's exactly what the judge cited, and he said, you have to prove that before you can impose those rules. So I've talked to many of those players and they have a deep conviction they are right that seems impervious to facts.

MIKE ADAMS: Good way to end it. All right. Let's give our panel a big round of applause.

[Applause]

MIKE ADAMS: You may want to talk to them some more afterwards. Enjoy the rest of the forum, have a good 2013. Thank you very much.