WEATHER RISK MANAGEMENT ASSOCIATION

Weather Risk Management Association's Annual Meeting Faces Extreme Weather

Speaker Bob Haas of MDA Weather braves the flooded streets of Miami Beach following a tornado warning and seven inches of rain to get to the Evening Event site during WRMA's 2014 Annual Meeting on May 14-16.

Session 1: "Rethinking Weather" Paul Walsh, Vice President of Weather Analytics and Meteorologist, The Weather Channel

Paul Walsh, Vice President of Weather Analytics and Meteorologist at the Weather Channel, delivered the keynote speech at the 2014 Weather Risk Management Association meeting in Miami, Florida. Mr. Walsh's presentation, entitled "Rethinking Weather," focused on how the Weather Channel uses weather data to increase sales for their website advertisers.

Mr. Walsh stressed that all weather is local, and this impacts how the Weather Channel utilizes its advertisements. "Three inches of snowfall in Atlanta has a different impact than a three inch snowfall in Buffalo," said Walsh.

During Mr. Walsh's presentation, he presented a case study about increased sales for a weather.com advertiser. While working with Proctor & Gamble to create the most effective advertisement for Pantene hair products, the staff at weather.com analyzed sales and weather data to determine the ideal weather that would cause frizzy hair and then targeted advertisements during those forecasts.

"We created an advertisement that was no longer an advertisement," explained Walsh. "It was providing helpful advice. Here's what you need, here's a coupon, click on this link and find the closest location to purchase."
Walsh went on to explain that this advertising method allowed them to anticipate and understand what kind of weather is going to drive sales of products. In Proctor and Gamble's case, weather.com has data that shows that the sales went up.

"It's an interesting way to use weather, but it's a way that we are going to see a lot more businesses using to optimize their sales," Walsh explained. Walsh believes that there is a real need for weather risk technologies. However, for these technologies to work, media/advertising, supply chains/operations, and risk management all have to be integrated.

Session 2: Oxford Style Debate: Is Trading Essential to the Weather Market's Future? What is the Future of the Weather Market?

Stephen Doherty, CEO of Speedwell Weather, served as moderator for the WRMA Oxford-style debate on the future of the weather market and the role of trading in the market's future. To introduce the session, Mr. Doherty shared his perspective of being "insanely optimistic" as to the future of the market and its continued growth and development. He introduced each panelist and asked that they share their viewpoints on the marketplace.

Panelist Josh Charnin-Aker of DRW Commodities noted that the question most frequently asked of him is how to get people to trade their weather risk like in a currency or a commodity market – and that the key inhibitor toward this transformation is the lack of speculators. Marty Malinow of Endurance Global Weather, echoed that the capacity to assume risk exceeds the amount of risk being hedged, and that originating risks are the biggest impediment toward market growth at this time. Looking back on the origin of the market, Munich Re's Bill Windle shared his observation that many end-users find weather risk management packages to be "luxury products," but that on the plus side that those who use the products continue to come back year after year. Brad Davis of MSI GuaranteedWeather emphasized the need for the market to assume a larger role in the public eye and to consider the development of big, customized products to increase the industry's exposure and satisfy end-user desires.

Mr. Doherty led a discussion on the negative perception of the speculator and the challenge that this commonly held view presents to the marketplace, and also raised questions for the group's consideration as to what makes a market efficient. Mr. Davis pointed out that "risk-takers are part of an orderly society," and then when natural disasters such as typhoons and earthquakes occur, it is the risk-takers who assure that cities can continue to prosper. He noted, however, that a secondary market cannot be forced.

The debate concluded with questions from participants that included methods to expand the acceptance of weather products with banks, tipping points in educating large utilities on the benefits of weather products and identifying those key decision makers, and locating the largest growth opportunities given the current environment. To close the session, Mr. Doherty noted that within the past ten years the market has transcended its perception as being temporary or inconsequential, and that the administrative and technical frictional forces impacting the industry are manageable: "I think that is a positive note to end on, because it's a tractable problem."

Session 3: Real World Examples from the End User Perspective

The next panel, "Real World Examples from the End User Perspective," was moderated by Heidi Centola of the CME Group. Hector Ibarra Pando from the World Bank kicked off the first presentation where he focused on the World Bank's insurance-linked securities, insurance pools and contingent loans. His case study outlined insuring natural disaster risk with catastrophe bonds in Mexico, where there is a high risk of earthquakes and hurricanes, and a high cost of recovery and reconstruction. Following a catastrophic event, funds are in high demand within a short timeline. As a result, catastrophe bonds were identified as an appropriate solution.

Claire Wilkinson from Willis continued the panel with a presentation about the impact of cyclones on the construction industry in Australia. Business owners were concerned about the impacts of staff evacuations from cyclones and the potential losses due to the cost of evacuation and completion delays. Ms. Wilkinson stressed that in these cases, there are three things that matter: a recent weather event/loss; legal, regulatory or fiscal requirement for coverage; and non-responsiveness of traditional hedging mechanisms (typically insurance) to the risk concerns. Typical insurance policies only cover the damage of the assets. However, in this case, they weren't worried about the damage of the assets, but rather the safety of the workers.

The panel continued with a presentation from Stuart Brown of Swiss Re Corporate Solutions. Mr. Brown's presentation focused on weather protection for China's consumer markets. In 2013, China experienced an especially hot summer that resulted in adverse effects on all types of businesses with the exception of air conditioner manufacturers. In China, air conditioning can be expensive for many with the increased cost to operate and purchase the unit. To assist with this problem, insurers came up with a consumer rebate promotion. If a customer buys an air conditioner and the temperature reaches a certain temperature for a determined amount of time, the customer receives a discount per day, up to a limit of

50% of what was paid. This promotion was recently launched, and data has not been collected to determine its effectiveness.

The panel concluded with a presentation from Ken Harper of Alinta on solar power's impacts on the Australian electricity market. Over the past two years, solar panel installations have grown significantly and their cost has dramatically diminished (or has reduced dramatically), leading to a decreased demand for traditional electricity. This trend is unlikely to reverse, given that ~~as~~ solar panel cost reductions are beginning to outweigh the removal of government subsidies. Mr. Harper stressed that forecasts of future demand and prices (and any demand-triggered products) need to be appropriately adjusted to reflect these changes. Solar panels, in addition to overall energy efficiency, have had a significant impact on electricity demand; an impact which has been felt not only in the electricity market but also in retail electricity revenue. Overall, Mr. Harper stressed that a different mix of risk management instruments are needed to account for these changes in the marketplace.

Session 4: The Extreme of Winter 2013/2014: Blame It on the ENSO, MJO, QBO, PDO, AMO, WPO, EPO, Sunspots, Typhoon Season, Eurasian Snow Cover, Extratropical SSTs, or Something Completely Different?

Moderator Brad Hoggatt, MSI Guaranteed Weather, opened the session with an introduction as to the 2013-14 winter and the records that were broken by the cold in the United States, including the fact that Chicago had the coldest December-March period on record since 1872, that the Polar Vortex cost the US $3 billion in a single January week, and that February 13, 2014 became the new record-setting day for canceled flights at 7,561, exceeding the previous record of 7,400 set during Hurricane Sandy. After reviewing several of the financial implications that this extreme weather had on businesses, the shipping and transportation industries, and governmental budgets, he introduced the three panelists for the session: Matt Rogers from Commodity Weather Group, Bob Haas of MDA Weather Service, and Michael Ventrice from WSI.

Mr. Rogers captivated attendees with an analysis of the extreme and persistent cold weather experienced in the United States. He noted the presence of a negative Pacific Decadal Oscillation, last seen in the 1950s, 60s, and 70s, and compared with graphical analysis how the current weather patterns have similarities to that time period – which points to the potential for another 20-30 years of cold winters, should the cycle continue. Additional factors that Mr. Rogers indicated as potential contributors to the extreme weather included the displaced Pacific warm pool and the active typhoon and storm patterns in the Northwest Pacific, which may have been amplified by volcanic activity or Asian air pollution. Looking ahead to the summer and coming winter, Mr. Rogers indicated that a cold winter does not necessarily indicate a hot or cool summer, but evaluated several considerations that point toward a cooler summer for 2014. Should a Modoki El Nino come through, a snowier, cooler winter similar to that of 2002-03 or 2009-10 is expected.

The next presenter, Mr. Haas, shared with WRMA Annual Meeting attendees how his company forecasted the past winter and the reasons they had accurate predictions in some areas and less accurate predictions in others. An analysis was provided on how despite the positive North Atlantic Oscillation (NOA) and Arctic Oscillation (AO), which would typically indicate a warm winter, a negative East Pacific Oscillation (EPO) points to the colder winter that was instead experienced; Mr. Haas indicated how these factors contributed toward a very cold North American winter while Europe enjoyed a milder winter. Switching gears to the summer outlook, Mr. Haas predicts a cooler than normal summer, about 2.5% off the 30-year normal, and more than 9% cooler than the 10-year average. He noted that there is consensus among industry experts that we'll be heading toward some level of El Nino, which may set the deck toward less hurricane activity than normal. In Australia, this El Nino may contribute to a very dry winter.

Mr. Ventrice began his presentation with several key statistics from the extremely cold United States winter, including how it was the second coldest winter on record for both Green Bay, WI and International Falls, MN. In his presentation, Mr. Ventrice highlighted how the stratospheric equatorial winds highlighted in the Quasi-Biennial Oscillation (QBO) are often not closely examined when they're evolving from one state to another. He indicated that in looking at a small sample size of the past several winters, when a transition from the easterly to westerly state or back is occurring in the QBO there has been a correlation to colder winters and informed WRMA attendees that there is currently a graduate student working on a identifying a transitional Multivariate QBO Index (MQI) that might yield an interesting seasonal projector. In exploring the summer ahead, he echoed previous presenters in his outlook of an El Nino developing which could lead to a cooler summer for the eastern two thirds of the United States.

Moving to a panel discussion, Mr. Hoggatt solicited questions from the audience. Panelists provided their bearish outlook as to the summer's probability of exceeding the National Cooling Degree Days average, with a similarly low probability expected of a National Heating Demand Days exceeding the 2013-14 winter. There was a discussion on the difficulty of predicting the number of extreme heat days exceeding 100 degrees in the summer, as well as the outlook for the Texas and California ongoing draught. Brad Hoggatt wrapped up the session by thanking the panelists for their participation.

Session 5: ILS Perspective

The Insurance-Linked Securities (ILS) Perspective panel kicked off the final day of the Annual Meeting. Marty Malinow of Endurance Global Weather moderated and was accompanied by panelists Steve Velotti from Pillar Capital Management, Michael Halsband from Sirius Capital Markets, and Bill Dubinsky from Willis Capital Markets & Advisory.

Mr. Malinow engaged panelists with thought-provoking topics including:

- Causes of the flood of new capital into the CAT/ILS space over the past few years: were institutional investors simply under-allocated to a legitimate, non-correlated, new asset class, or was it in response to central bank-engineered low interest rates around the world and traditional assets becoming more correlated due to “risk-on” strategies?
- Reasons why the ILS funds have not focused intensely on weather and have not entered the market to compete with prices as they have in the CAT Market.
- Similarities and differences between the ILS Market and the current Weather Market.

Steve Velotti discussed the risks covered in ILS markets. He explained how the insurance market in South America isn’t as developed as in the United States and Europe. The panel continued with Michael Halsband from Sirius Capital Markets. Mr. Halsband discussed a new bond available in the United States that includes meteor coverage and volcanic eruptions. He went on to discuss key areas where investors can come in: cat bonds, sidecars (private quota-shared deals done principally through special purpose reinsurance companies) and cat swaps. Bill Dubinsky from Willis Capital Markets & Advisory concluded the panel with information about insurers and reinsurers. He stated that insurers are more important buyers and sponsors of the bond than reinsurers, as insurers want to have a more dynamic book.

Session 6: Regulatory Impacts: *Updates in Regulation Impacting the Weather Market*

Claude Brown, partner at Reed Smith, served as the final speaker in the WRMA Annual Meeting, providing a comprehensive review of the myriad regulations affecting the weather market. Particular attention was given to US- versus European-based regulations and the extra-territorial effects of those regulations on the worldwide marketplace.

Mr. Brown began his presentation with an overview of the Dodd-Frank regulation and its key impacts on the weather market. He detailed the regulation’s potential effect on swap execution and optionality in swaps, highlighted how the Volker Rule has led many banks to exit the commodities space, and touched upon the new documentation provisions and the resulting loss of flexibility for exchange trading and central party clearing. His analysis of the effect of Dodd-Frank on European and multi-entity organizations served as an eloquent segue to a deeper review of several European regulations.

In his review of the European Market Infrastructure Regulation (EMIR), Mr. Brown reviewed the key considerations with the regulation and with the collateralization of uncleared trades, indicated the qualifications for grandfathering, and highlighted the territoriality issues with the regulation. Diving deeper in to the European regulatory environment, Mr. Brown provided background on the Markets in Financial Instruments Directive (MiFID) and the ramifications of its commodity exemption, outlined what areas the Regulation on Energy Market Integrity and Transparency (REMIT) does and does not impact, and led a discussion on the points of confusion within the Benchmark Index Regulation where further clarification would be beneficial to the industry.

Mr. Brown closed his presentation with a review of the EU’s proposed Financial Transaction Tax (EU FTT) and by facilitating an engaging question and answer session. WRMA Meeting Attendees discussed the status of the EU FTT and the potential impact of the proposed tax. Mr. Brown offered the EU FTT “Q&A” page as a valuable resource for further information.

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