



I. Introduction

Our expert panelists will be providing updates from across the commodity complex this afternoon.

Three of this afternoon's panelists are also involved in the *Global Commodities Applied Research Digest* (*GCARD*), http://www.jpmcc-gcard.com/subscribe, a publication of the J.P. Morgan Center for Commodities.

Mr. Lance Titus serves on the *GCARD*'s Editorial Advisory Board and is a past contributor. Ms. Julie Lerner has contributed to a past issue of the *GCARD* on Blockchain's potential for physical commodity markets while Dr. Blu Putnam writes the *GCARD*'s "Economist's Edge" column.







Dr. Blu Putnam

Chief Economist, CME Group and Member of the JPMCC Research Council



"The Changing Dynamics of Gold, Copper, and Oil"

- Correlations among gold, oil, and copper can be stable for long periods and then diverge sharply.
- Gold seems less interested in global dissonance and is currently focused on U.S. rate expectations.



Dr. Blu Putnam

Chief Economist, CME Group and Member of the JPMCC Research Council

(Continued)

- Copper retains the moniker of "Dr. Copper" as a reliable metric by which to assess expectations of global growth during this trade war era.
- Oil has had to contend with a large dose of technical disruption, in addition to slowing global growth.



Dr. Karl SkoldHead Of Agricultural Economics, JBS

"Pigs, Floods and Tariffs"

- Updates on the key drivers in the agricultural markets
- A focus on the impact of the African swine fever outbreak



Ms. Julie Lerner
Chief Executive Officer, PanXchange

"Characteristics of Markets As They Mature"

- Mayhem in the nascent hemp industry.
- US proppants: what happens when new supply comes on board and spot cash markets evolve?
- What's next for the "Big 5" trade houses as trading margins shrink in mature markets?





Mr. Lance Titus

Managing Director, Uniper Global Commodities and Member of the JPMCC Research Council



"Innovations in Commodity Structuring"

- Benefits
- Risks
- The necessity of sophisticated analytics



Hilary Till

Solich Scholar, J.P. Morgan Center for Commodities, University of Colorado Denver Business School; and Contributing Editor and Project Manager, Global Commodities Applied Research Digest

Hilary Till is also a principal of Premia Research LLC, which designs investment indices that are calculated by <u>S&P Dow Jones Indices</u>. Prior to Premia, Ms. Till was the Chief of Derivatives Strategies at Putnam Investments where she oversaw the strategy development and execution of about \$90 billion annually in exchange-traded and over-the-counter derivatives; and before Putnam, Ms. Till was a Quantitative Analyst at the Harvard Management Company, the university's endowment firm. Ms. Till's additional academic affiliations include her membership in the North American Advisory Board of the London School of Economics and her position as a <u>Research Associate at the EDHEC-Risk Institute</u> (France.)

In Chicago, Ms. Till is a member of the Federal Reserve Bank of Chicago's Working Group on Financial Markets. She also has provided seminars (in Chicago) to staff from the Shanghai Futures Exchange, China Financial Futures Exchange, Zhengzhou Commodity Exchange, and the Dalian Commodity Exchange. In addition, Ms. Till is a board member of the International Association for Quantitative Finance (New York City).

Ms. Till has a B.A. with General Honors in Statistics from the University of Chicago and an M.Sc. degree in Statistics from the London School of Economics (LSE). She studied at the LSE under a private fellowship administered by the Fulbright Commission.



Dr. Blu Putnam

Chief Economist, CME Group and Member of the JPMCC Research Council

Dr. Bluford Putnam is Managing Director and Chief Economist of CME Group. As Chief Economist, Dr. Putnam is responsible for leading the economic analysis on global financial markets by identifying emerging trends, evaluating economic factors and forecasting their impact on CME Group and the company's business strategy. He also serves as CME Group's spokesperson on global economic conditions and manages external research initiatives.

Prior to joining CME Group, Dr. Putnam gained experience in the financial services industry with concentrations in central banking, investment research and portfolio management. He also has served as President of CDC Investment Management Corporation and was Managing Director and Chief Investment Officer for Equities and Asset Allocation at the Bankers Trust Company in New York. His background also includes economist positions with Kleinwort Benson, Ltd., Morgan Stanley & Company, Chase Manhattan Bank and the Federal Reserve Bank of New York. Dr. Putnam holds a bachelor's degree from Florida Presbyterian College (later renamed Eckerd College) and a Ph.D. in Economics from Tulane University.

Dr. Putnam has authored five books on international finance, as well as many articles that have been published in academic journals, including the *American Economic Review*, *Journal of Finance*, and *Review of Financial Economics* among others. His newest book, Economics Gone Astray, is now available from World Scientific (WS) Professional.

Dr. Putnam is also a member of the J.P. Morgan Center for Commodities' Research Council as well as its Advisory Council.



Dr. Karl SkoldHead Of Agricultural Economics, JBS

Dr. Karl Skold is the Head of Agricultural Economics for JBS. He leads the commodity analysis for the company and works as part of the risk group.

Prior to joining JBS, Dr. Skold was in various roles in the risk management, procurement and analysis. Previously, Dr. Skold was Director of Research for Bunge North America. He led the economic analysis and supply & demand forecasting for the U.S., Canada, and Mexico.

At Westside Economics, he provided risk management solutions and economic analysis to packers, processors and restaurant chains. As Vice President of Commodities at ConAgra Foods, he led the procurement and risk management activities for grains, oilseeds, proteins, dairy, and energy. Prior to ConAgra Foods, he responsible for economic analysis at Frontier Risk Management in Chicago.

Dr. Skold has a M.S. and Ph.D. from Iowa State University in Agricultural Economics. He holds a B.S. degree from Colorado State University in Economics.



Julie Lerner Chief Executive Officer, PanXchange

Ms. Julie Lerner is the Founder and CEO of PanXchange, a negotiation and trading platform for physical commodities that specializes in bringing liquidity and efficiencies to thin and/or nascent markets. She holds two patents on the system, was selected as a Futures Industry Association Innovator and most recently, was selected as an Outstanding Woman in Business by the Denver Business Journal.

Ms. Lerner began her career with Cargill International and later became the senior trader for Cargill's Latin American sugar markets, where she focused on the development of origination markets with successful financing programs and warehouse and distribution programs. She has also held several positions in trading and business development with companies such as XL Financial (weather derivatives) and Sempra Energy Trading (electricity).

She has deep experience in regional and international agricultural and energy markets. Geographically, her area of expertise covers US, Europe, Latin America and East Africa. She is an advisor to early stage companies and has a 360 degree perspective from entrepreneur to angel investor, and from smallholder farmers to Fortune 100 executives.



Lance Titus

Managing Director, Uniper Global Commodities and Member of the JPMCC Research Council

Mr. Lance Titus serves as Managing Director of Business Development, Origination and Structured Transactions at Uniper Global Commodities. He has over twenty years of commodities trading, structuring and risk management experience. Having held senior leadership roles from Wall Street to the energy industry, working for an investment bank, as well as for leading utilities, unregulated entities and merchant energy firms. He has transacted over \$15 Billion in deals across the energy and environmental commodity markets with a sector focus in electricity, natural gas, renewables, carbon and emissions. Mr. Titus has been a featured panelist at Bloomberg's "The Future of Energy Summit" in New York, and also serves as an adjunct professor for the course, "Foundations of Commodities" at the University of Colorado Denver.

Mr. Titus holds an MBA from the University of Denver, Daniels College of Business. and a B.S. degree in Finance and Marketing from Clarion University. He serves on the Advisory Board of cQuant.io, is a member of the J.P. Morgan Center for Commodities Advisory Council, serves on its Research Council and is a member of the *Global Commodities Applied Research Digest* Editorial Advisory Board.



