



Contributing Editor's Letter

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Ms. Hilary Till, the Contributing Editor of the *Global Commodities Applied Research Digest (GCARD)*, with Mr. Leo Melamed, Chairman Emeritus of the CME Group, on October 12, 2018. Mr. Melamed will be interviewed in a forthcoming issue of the *GCARD* on financial and technological innovation, past and present. Consistent with the theme of innovation, this issue of the *GCARD* includes a special feature on cryptoassets and blockchain.

Dear Reader,

Welcome to the sixth issue of the *Global Commodities Applied Research Digest*. We are grateful that members of both the JPMCC's [Research Council](#) and the *GCARD*'s [Editorial Advisory Board](#) have continued to lend their expertise to the Winter 2018 issue of the *GCARD*. And we are thankful that additional commodity thought-leaders have begun contributing to the *GCARD* as well.

This issue includes articles that cover energy themes that have been past favorites of the *GCARD* such as (a) the importance of crude oil swing producers and spare capacity; (b) the dramatic changes in the liquefied natural gas markets; and (c) the analysis of renewable power purchase agreements. Along with these familiar themes, we are proud to announce a completely new section: an educational special feature on cryptoassets and blockchain. We anticipate that we will continue addressing this innovative area in future issues of the *GCARD*. Now before describing each of the current issue's articles, we need to note that two sets of congratulations are very much in order.



Congratulatory Notes

Kudos must first go to Dr. Jian Yang, the JPMCC's Research Director and J.P. Morgan Endowed Research Chair, for organizing a very successful conference of global commodity experts during the [JPMCC's 2nd International Commodity Symposium](#) in August. Dr. Yang is also a Professor of Finance and Risk Management at the University of Colorado Denver Business School. Observed Dr. Andrei Kirilenko of the Imperial College Business School (U.K.) in [Linares \(2018\)](#): "I have been in this field for a long time and can tell you the quality of [the conference's] papers and presentations and presenters is world-class."

In addition, the *GCARD* team is delighted to welcome Dr. Yosef Bonaparte as the newly named Director of the JPMCC. Dr. Bonaparte is also an Associate Professor of Finance at the University of Colorado Denver Business School. Dr. Rohan Christie-David, the Dean of the Business School, noted: "I am looking forward to seeing the Center go from strength to strength" with Dr. Bonaparte (as director, responsible for the day-to-day operations of the Center) and with Dr. Yang (as research director of the Center).

The Winter 2018 Issue's Content

This issue of the *GCARD* is divided into the following six sections: (1) the Research Council Corner; (2) the Research Digest Articles section; (3) the Contributing Editor's Section; (4) the Industry Commentaries section; (5) Current Editorial Advisory Board Member News; and (6) a Special Feature on Cryptoassets and Blockchain.

One caveat regarding the Special Feature is that like all articles in the *GCARD*, the Special Feature's papers do not necessarily represent the views of the JPMCC, its sponsors, or donors.

Research Council Corner

The following authors contributed articles to the Research Council Corner: (a) Dr. Bluford Putnam of the CME Group; (b) Dr. Brock Mosovsky of cQuant.io and Mr. Lance Titus of Uniper Global Commodities; and (c) Mr. Robert Greer, Scholar-in-Residence at the JPMCC and Member of PIMCO's Index Oversight Committee. Dr. Putnam, Mr. Titus, and Mr. Greer are each members of the JPMCC's Research Council.



Dr. Bluford Putnam's thought piece explores the following four factors in analyzing the long-term prospects for crude oil and natural gas: (1) the evolving nature of oil production sensitivity to price changes, (2) the role of U.S. exports in the globalization of oil and natural gas prices, (3) the impact of electric cars and increasing transportation efficiencies on the demand for oil, and (4) the trends in the generation of electrical power away from coal and towards natural gas and alternative sources. Dr. Putnam presented on these topics to a [panel of energy experts at the U.S. Energy Information Administration in Washington, D.C. on September 27, 2018](#). This panel, in turn, was organized by Dr. Thomas Lee of the U.S. Energy Information Administration; [Dr. Lee](#) is also a member of the GCARD's Editorial Advisory Board.

Dr. Brock Mosovsky and Mr. Lance Titus, in turn, continue with the energy theme in the current issue of the GCARD. Their technical article is the second in a two-part series on renewable Power Purchase Agreements (PPAs), in which they explain PPA valuation and risk assessment. [Part 1](#) of the series was published in the Summer 2018 issue of the GCARD. Consistent with the JPMCC's mission of covering all segments of the commodity field, the topic of renewable energies has also been featured prominently during the JPMCC's Research Council meetings; [Till \(2016\)](#), for example, summarizes a JPMCC Research Council presentation on wind-and-solar projects in California.

The third and final article in this section is provided by Mr. Robert Greer, who has been a stalwart supporter of both the JPMCC and the GCARD. We [interviewed](#) Mr. Greer in the Winter 2017 issue, and he generously [contributed](#) to the GCARD's inaugural issue in the Spring 2016 edition. In the current edition of the GCARD, Mr. Greer contributes to the understanding of how commodity investing can fit into comprehensive portfolios.

Research Digest Articles Section

In this section of the GCARD, [Professor Ana-Maria Fuertes](#) of Cass Business School, City, University of London (U.K.) summarizes two scholarly papers, which examine commodity price movements from two very different perspectives. The first paper analyzes the underlying factors driving Commodity Trading Advisor returns; of note, the Spring 2016 issue of the GCARD also [covered](#) areas related to this subject. The second paper analyzes the "impact of commodity price movements on child mortality ... [in] low and lower-middle income countries." This research article concludes that an "effective approach to improving child wellbeing ... should combine hedging, import diversification and improvements ... [in] institutional quality." Such policy recommendations were also covered in [Till \(2011\)](#) during the aftermath of destabilizing grain price spikes earlier in the decade.

Contributing Editor's Section

We further explore the conditions that determine the success or failure of futures contracts in Contributing Editor's Section. We have briefly analyzed this topic in articles in the [Spring 2016](#) issue, which provided an overview of the subject, and in the [Summer 2018](#) issue, which discussed a number of new commercial circumstances that ushered in the intense need for hedging instruments. In the current issue, we examine the history of futures regulation and conclude that a futures contract's success is also



determined by how onerous relevant regulations or laws are. These three articles were drawn from a lecture that was provided by the author to staff from the Shanghai Futures Exchange.

Industry Commentaries

This issue's Industry Commentaries section includes articles from three energy experts who have past or present ties to policymaking in Washington, D.C. The authors in this section of the *GCARD* are as follows: Mr. Adam Sieminski, President of KAPSARC (Saudi Arabia) and former Administrator of the U.S. Energy Information Administration; Mr. Robert McNally, President of Rapidan Energy Group and former Senior Director for International Energy on the U.S. National Security Council; and Dr. Agnia Grigas, Nonresident Senior Fellow at the Atlantic Council (Washington, D.C.).



Dr. Agnia Grigas, Ph.D., during the launch of her book, [The New Geopolitics of Natural Gas](#) (Harvard University Press, 2017), at the Atlantic Council in Washington, D.C. on September 12, 2017. Dr. Grigas covers the salient points of her book in this issue of the *GCARD*.

Mr. Adam Sieminski's article summarizes research on the value to the global economy of OPEC's spare capacity. With spare production capacity, a swing producer can neutralize the impact of oil shocks, preventing damage to the global economy. He acknowledges that North American shale oil has made non-OPEC supply much more reactive to price, a point also emphasized in Dr. Bluford Putnam's article in this issue of the *GCARD*. However, Mr. Sieminski notes that "shale oil is also subject to potential logistical constraints," and "it does not suffice to rapidly offset unanticipated shocks of large magnitude;" therefore, OPEC spare capacity still provides value in stabilizing oil markets.



Mr. Sieminski's article is a welcome addition to the *GCARD*'s past coverage of oil spare capacity issues. This past coverage has included an examination of when OPEC spare capacity has been the most important factor in determining oil prices, which was [covered](#) in the Spring 2016 issue of the *GCARD*. In addition, the Winter 2017 issue of the *GCARD* included an [article](#) that illustrated one way of incorporating shale excess supply, in addition to OPEC spare capacity, in considering overall spare production capacity.

Mr. Robert McNally's article, in turn, describes how the oil market is in a new era marked by boom-and-bust price swings in the absence of a credible swing producer. For a number of structural reasons, Mr. McNally argues that shale producers cannot cooperate to stabilize prices; they "are extremely diverse regarding resources and capital structure, they pursue growth targets instead of price stability, and they abide by punitive anti-trust laws."

Mr. McNally's article continues the debate in the pages of the *GCARD* on how to define the concept of swing producer. Previously, an [article](#) in the Fall 2016 issue of the *GCARD* asked whether North American shale producers could be considered the new swing oil producers. That article concluded the answer is perhaps yes, but only imperfectly so, given that it may take up to 12 months for fairly uniform production decisions to be made.

Dr. Agnia Grigas provides the final article in this issue's collection of Industry Commentaries. She covers both the transformation of the global natural gas markets and the rise of the liquefied natural gas (LNG) trade, which are causing shifts in global geopolitics. The *GCARD* began [covering](#) the significant changes in the LNG markets in an article in the Spring 2017 issue. That article described both the large increases in capacity and the ensuing changes in contractual conditions, governing this market. In the Winter 2017 issue, we included an [article](#) on the non-market forces that are contributing to a narrowing of inter-regional price differences in the LNG markets. On a related note, Dr. Bluford Putnam's article in this issue of the *GCARD* discusses how U.S. exports of LNG will increasingly link markets around the world. We are grateful for Dr. Grigas' article in adding the geopolitical dimension to our understanding of the sea-changes in the LNG markets.

Editorial Advisory Board Member News

In this issue of the *GCARD*, we are initiating a new section on Editorial Advisory Board (EAB) Member News. The *GCARD*'s EAB consists of experts from across all commodity segments. The board is composed of academics, researchers, educators, policy advisors, and practitioners, all of whom have an interest in disseminating thoughtful research on commodities to a wider audience. Board members provide the Contributing Editor with recommendations on articles that would be of particular relevance to commodity-industry participants as well as author articles in their particular areas of commodity expertise. In the News section, we update readers on the books and conferences that board members have respectively contributed to or participated in.



Special Feature on Cryptoassets and Blockchain

Another new feature of the *GCARD* is the inclusion of a Special Feature section. In this issue, we focus on cryptoassets and blockchain. But how does this topic fit in a digest devoted to covering commodities? The answer is two-fold. [1] At this point, virtual currencies are considered commodities from a U.S. regulation standpoint (Commodity Futures Trading Commission (CFTC), 2018). [2] In addition, blockchain may have applications in commodity trading. Concerning the latter possibility, the Summer 2018 issue of the *GCARD* [summarized](#) a presentation from the [JPMCC's 1st International Commodities Symposium](#) whereby the lecturer discussed how “blockchain technology ... [could] digitize receipts and bills of lading, leading to faster shipping times and potentially safer financing of commodities by preventing the unsavory practice of pledging commodity collateral to multiple lenders.”

In the current issue of the *GCARD*, we are delighted to provide a special feature of four articles on this complex topic, starting with a wonderful educational piece by a team of researchers at Société Générale. This section also includes articles from researchers at the Federal Reserve Bank of San Francisco as well as from the following two industry leaders: Ms. Julie Lerner of PanXchange (who authored an article) and Mr. Don Wilson of DRW (who is interviewed.) Summaries of the four articles follow.



Mr. Mark Keenan, Managing Director, Global Commodities Strategist and Head of Research for Asia Pacific at Société Générale Corporate & Investment Bank, presenting in Singapore on November 22, 2017. Mr. Keenan is also a member of the *GCARD*'s Editorial Advisory Board and is a co-author of an educational piece on cryptoassets and blockchain in this issue of the *GCARD*.

For the first article in the special feature, the *GCARD* is very fortunate to be able to include an accessible, comprehensive, educational article on cryptoassets and blockchain from the following Société Générale



authors: Mr. Mark Keenan, Dr. Michael Haigh, Mr. David Schenck, and Mr. Klaus Baader. Mr. Keenan, in turn, also [contributed](#) to the Summer 2018 issue of the *GCARD* with a summary of his book, [Positioning Analysis in Commodity Markets](#).

(We are also happy to announce that congratulations are in order to Mr. Keenan: his Summer 2018 *GCARD* article was cited authoritatively by the *Financial Times* (U.K.) in July 2018.)

The second article in this issue's special feature covers how futures trading plausibly impacted bitcoin prices. This article is provided by Dr. Galina Hale (Federal Reserve Bank of San Francisco), Dr. Arvind Krishnamurthy (Stanford Graduate School of Business), Dr. Marianna Kudlyak (Federal Reserve Bank of San Francisco), and Mr. Patrick Shultz (formerly with the Federal Reserve Bank of San Francisco.)

Next, our special feature looks into industry applications of the new technologies in question. Ms. Julie Lerner of PanXchange provides a realist's perspective on implementing blockchain in commodity trading, discussing the barriers to adoption. Still, she sees "the potential for blockchain to indeed be transformative," predicting "that energy traders will be the first to adopt the blockchain in the physicals space, as they tend to be the most technologically savvy." She predicts "metals next, then agricultural products last."



Ms. Julie Lerner, Chief Executive Officer, PanXchange, presenting at the JPMCC's 2nd International Commodities Symposium at the University of Colorado Denver Business School on August 14, 2018.

For a further industry perspective, we turn to an interview with Mr. Don Wilson, CEO of DRW; and Co-Founder and Board Member of Digital Asset Holdings, in the concluding article of the special feature. Mr. Wilson's Chicago-based firm became involved in cryptoassets and blockchain in three different



ways: they bought bitcoin, established a trading desk, and co-founded the distributed ledger technology firm, Digital Asset Holdings. Mr. Wilson predicts that “[m]any ideas and projects in the marketplace will fail, but that process will give rise to better ideas and projects. Our perspective is that many will go on to make a significant impact on the world.”

Conclusion

In closing, we would like to thank Dean Rohan Christie-David for his support of the JPMCC's *Global Commodities Applied Research Digest* in addition to expressing gratitude to the CME Group Foundation for generously sponsoring the *GCARD*. We would also like to extend a warm welcome to the [Chartered Alternative Investment Analyst](#) (CAIA) Association as the *GCARD*'s latest professional society partner.

Best Regards,

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