Thoughts on the Twists and Turns of the Virus' Impact on Commodities

Bluford Putnam, Ph.D.
Chief Economist, CME Group; and Member of the J.P. Morgan Center for Commodities' (JPMCC's) Research Council at the University of Colorado Denver Business School

Dr. Bluford Putnam, Ph.D., the Chief Economist of the CME Group, answers a question during a commodity industry panel at the JPMCC's 3rd Annual International Commodities Symposium. The panel session was moderated by Ms. Hilary Till, the *GCARD*'s Contributing Editor. Joining Dr. Putnam during the panel discussion were (from left-to-right) Mr. Lance Titus, Managing Director, Uniper Global Commodities and Ms. Julie Lerner, Chief Executive Officer, PanXchange.

Introduction

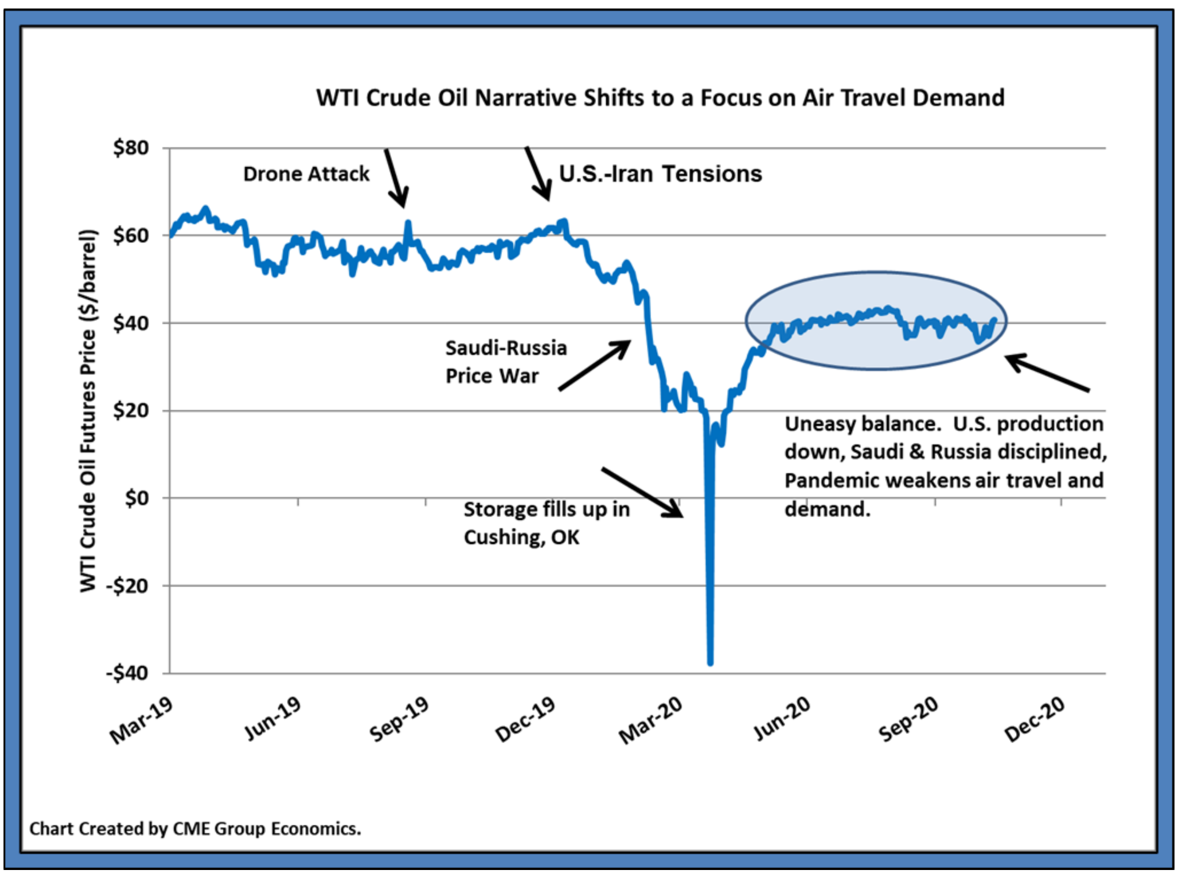
The pandemic of 2020 had a major influence on almost every facet of life as the COVID-19 virus wound its way around the world. Commodity markets were impacted as well, yet not in any unifying pattern. Every commodity was influenced differently. In this research, we look back at how four selected commodities performed – oil, copper, soybeans, and gold – in 2020, and try to detangle the influence of the virus from everything else that was happening. It is a conflicted picture, which illustrates the many feedback loops and dynamic aspects of complex systems.

Oil

When the coronavirus started to spread in China, at the very beginning of the year 2020 the commodity market with the first reaction was oil. China is the world's largest importer of crude oil. As China shut down the province of Hubei with its capital city, Wuhan, and then restricted air travel domestically and internationally, oil prices declined sharply as market participants realized the implications for the demand for oil from a Chinese economy in recession and partly shutdown.

The twists and turns of feedback loops became apparent in February and March as Saudi Arabia and Russia reacted to falling oil prices. Initially, instead of cutting production, Saudi Arabia decided to put pressure on other producing regions, especially U.S. shale and Russia by keeping production elevated. U.S. shale responded to the downward price pressures quickly, and the drilling of new wells dropped precipitously. Russia, however, took the production challenge, and there was a short-lived price war, driving the price of oil lower and lower. Coupled with storage constraints in Cushing, Oklahoma, the spot oil price actually went negative for a few hours at the end of the trading day in late April 2020. After that, crude oil prices climbed steadily back to the $40/barrel territory. The oil maturity curve, which had been in backwardation (i.e., spot prices higher than long-dated prices) before the pandemic, flipped to contango (i.e., spot prices lower than long-dated prices) during the Saudi-Russia price war, and then the curve moved to a relatively flat shape in the second half of 2020 as an uneasy balance returned to the market.

Figure 1
WTI Crude Oil Futures



Source: CME DataMine, Market Sentiment Meter (CLCO) powered by 1QBIT.

In the fall of 2020, the dynamics of the virus hit the oil market again. As the virus had another surge in Europe and then the U.S., the focus turned to air travel. There had been hopes in the summer of 2020 that air travel was on the road to recovery. This expectation of a recovery in air travel became critical for the oil market on the margin. This is because jet fuel is an important part of the end-use of crude oil.

The expectation of a recovery in air travel met two obstacles in the fall of 2020. First, many corporations began to realize that the work from home culture of office workers and the explosion of virtual meetings during the pandemic was working reasonably well. That meant that even after the pandemic subsides and workers return to their office towers, businesses could slash travel budgets and permanently rely, at least to some extent, on virtual meetings instead of business travel. That is, the realization hit market participants and airlines, that business travel demand might never return to pre-pandemic levels.

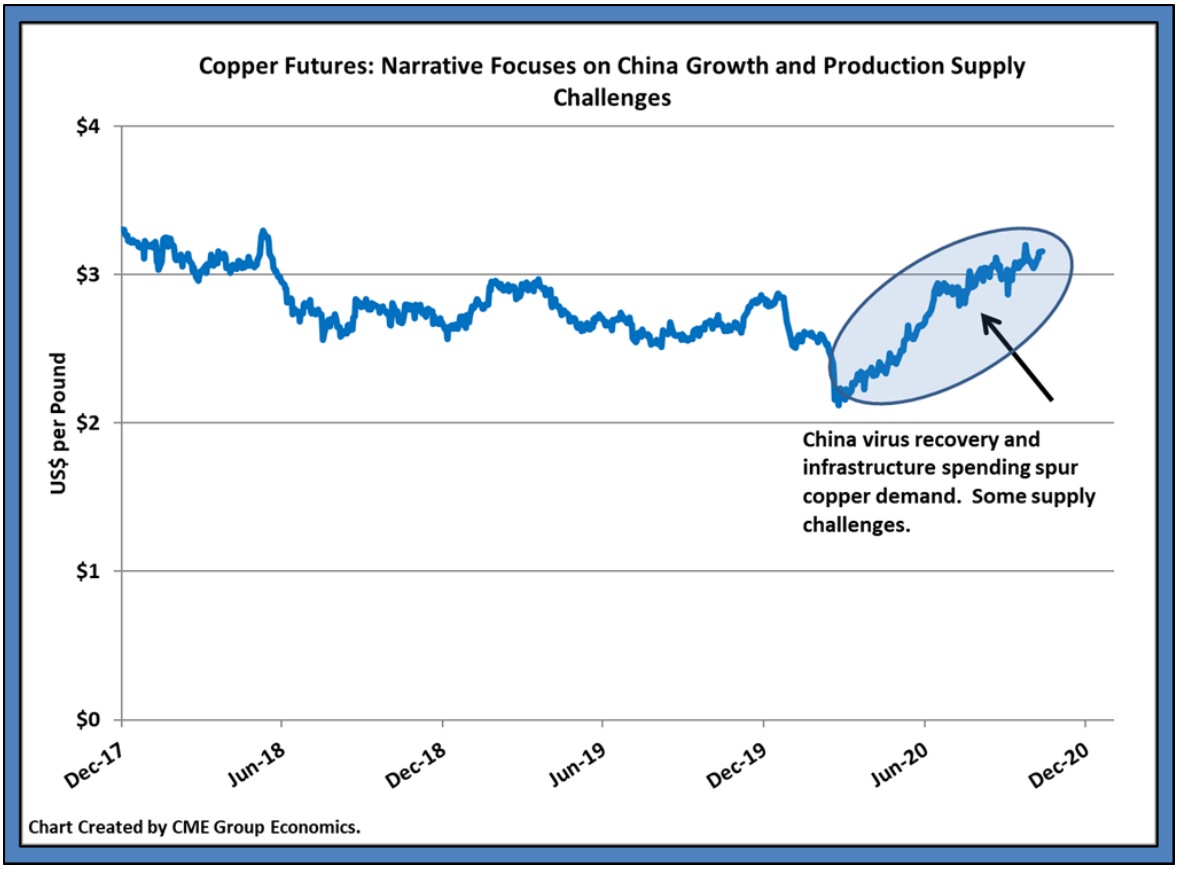
At the same time, another surge of the virus hit Europe and then North America, further dampening domestic air travel and extending the restrictions on international travel. Oil prices were pushed back below $40/barrel. The only outlier to this narrative was China. China's economy had started a strong recovery in the second quarter of 2020, continuing into the third quarter. With China, domestic air travel had recovered to some 90% of pre-pandemic levels, even if international air travel was still largely restricted.

At year's end, the potential for the arrival of an effective vaccine for the virus coming in 2021, served to elevate expectations of an economic recovery around the world, and the possibility of increased air travel and oil demand.

Copper

Copper is a shorter story, with very much a China focus. As with oil, China is the largest buyer of copper in the world. When the virus hit China at the beginning of the year, copper prices fell. When the Chinese economy mounted a solid recovery, copper prices rebounded. There was much less complexity to the copper narrative than for oil. With oil, the market had to cope with the changing production policies of Saudi Arabia and Russia. And while there were some extraction disruptions in 2020, copper prices largely followed the decline and then recovery of the Chinese economy.

Figure 2
Copper Futures

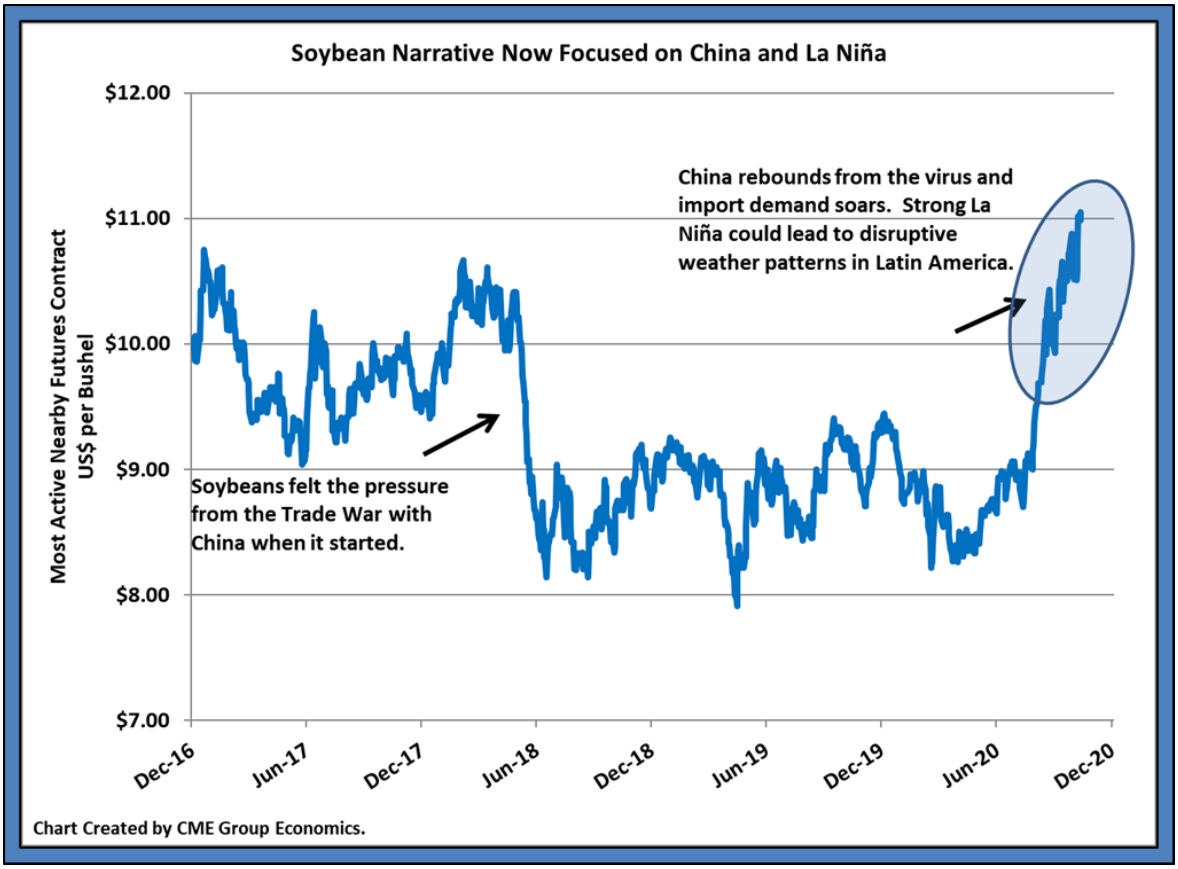


Source: Bloomberg Professional (HG).

Soybeans

The global soybean market dealt with two unrelated narratives in 2020. The first was the virus, and again, the attention was on China. Soybeans prices were not much impacted when the virus initially hit in early 2020. It was when China mounted its robust economic recovery that soybean prices rose. A strengthening Chinese economy allowed the country to expand dramatically its import demand for grains, not just soybeans, but corn as well. China was also successfully working to rebuild its hog herd from the bout with African swine fever. The Chinese appetite for chicken and pork is huge. Chickens mostly just eat soybean meal, while hogs have a slightly more diversified diet – soybeans for protein, corn for energy, and some wheat and sorghum to fill out the feed mix. In any case, second half 2020 Chinese demand for soybeans soared in both North and South America, pushing the U.S. price from around $8/bushel into the $10/territory. In this case, it was China's ability to control the virus and get its economy moving quickly that impacted the price of soybeans.

Figure 3
Soybean Futures



Source: CME DataMine, 1QBIT, Market Sentiment Meter Data.

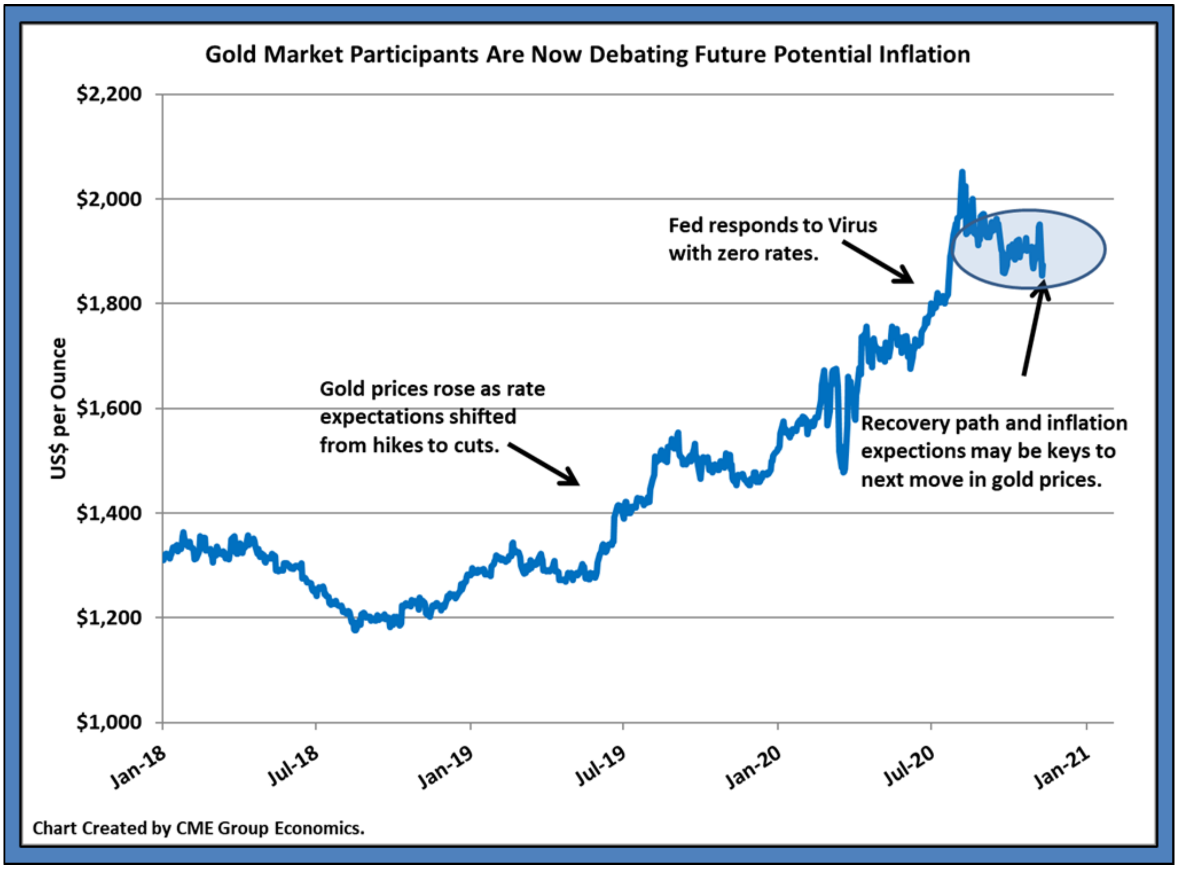
Gold

For oil, copper, and soybeans, the impact of the virus wove its wave through the interconnected dynamics of supply and demand. For gold, the narrative has a few more steps.

Gold is an inflation sensitive commodity. It is held as a store of value and used to diversify financial portfolios. Gold bears no explicit interest rate, so rises in U.S. dollar interest rates tend to work against the gold price, while falling rates support the gold price. So it went in the last few years. When the Federal Reserve (Fed) was raising rates, gold prices were stuck down in the $1200/ounce range. When the Fed announced it would halt its step-by-step rate rise program, gold rallied. When the Fed cut rates, gold rallied some more. When the virus hit in the first half of 2020 and the Fed pushed short-term rates down to near zero, gold surged over $2000/ounce.

In the second half of 2020, though, the story changed. With the U.S. federal funds rate at near zero and the Fed providing guidance that short-term rates would stay there for an extended period time, even if inflation pressures emerged, there was no further push upward on gold prices for any potential Fed rate cuts, and gold settled back into a wide trading range centered around $1900/ounce.

Figure 4
Gold Futures



Source: CME DataMine, 1QBIT, Market Sentiment Meter (GCOG).

The debate in the gold market at the end of 2020 was whether inflation pressures would actually emerge in 2021, 2022, or beyond. The case for inflation reemerging in force, and along with it higher gold prices, was based on the fusion of monetary and fiscal policy brought about by policy responses to the pandemic of 2020. In the U.S., and in Europe and Japan, government budget deficits were expanding dramatically to cushion the impact of the partial shutdowns of economic activity, and central banks were buying large quantities of government debt. This was effectively a back-door entry into the world of Modern Monetary Theory (Putnam, 2020).

One group of analysts argued that once the pandemic was contained and if stimulus was continued for an extended period after the economic rebound was well underway, then the development of serious inflation pressures would be highly likely. Another group of analysts took a different view of the longer-term impacts of the pandemic. These analysts argued that many pandemic-induced behavioral changes were going to be long-lasting, such as more flexible work from home alternatives and less business travel.

This could result in a slower economic recovery, with many years of elevated unemployment likely. With elevated unemployment, this camp could not see the catalyst for serious inflation pressures emerging. Time will tell how this debate turns out, and for certain, gold market participants will be watching with intense interest.

Bottom Line

What is clear is that the path of the virus, with its various twists and turns, moving from region to region, surging and then receding, emerged as a key factor in commodity market analysis for 2020. The main influence of the virus worked its way through its influence on the demand side of the price equation. Although with oil, there were feedback loops impacting supply as production policies shifted in Saudi Arabia and Russia. Gold presented the most complex narrative about the virus, because the story first focused on Federal Reserve rate cuts and then shifted to debating to the possibilities of a re-emergence of inflation down the road, once the virus was contained.

Endnote

The research views expressed herein are those of the author and do not necessarily represent the views of CME Group or its affiliates. All examples in this presentation are hypothetical interpretations of situations and are used for explanation purposes only. This report and the information herein should not be considered investment advice or the results of actual market experience.

Reference

Putnam, B., 2020, "From Phase Transitions to Modern Monetary Theory: A Framework for Analyzing the Pandemic of 2020," *Review of Financial Economics*, Version of Record online: October 22.

Author Biography

BLUFORD PUTNAM, Ph.D.
Chief Economist, CME Group

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.