Gold, Copper, and Oil: Dancing to Different Drummers

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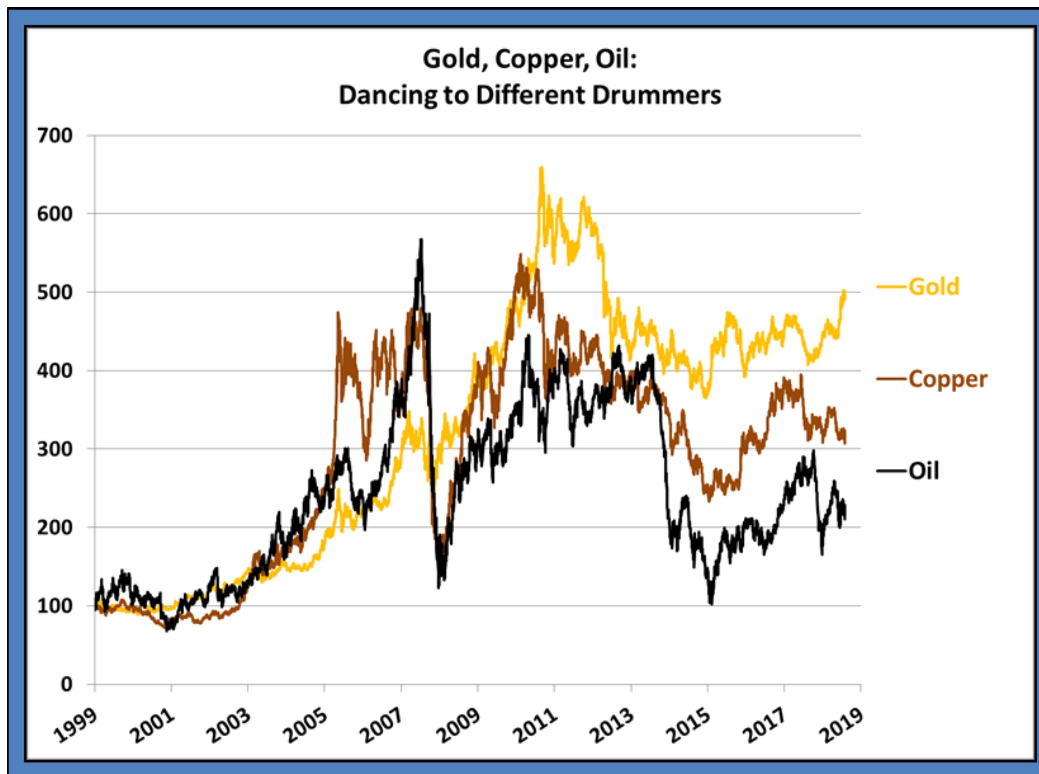
Dr. Bluford Putnam, Ph.D., Chief Economist, CME Group, and member of the J.P. Morgan Center for Commodities' (JPMCC's) Research Council, presented on "The Changing Dynamics of Gold, Copper, and Oil" at the JPMCC's 3rd Annual International Commodities Symposium, which was held at the University of Colorado Denver Business School in August 2019.

Back in the early 2000s, the global economic boom driven by the rise of China lifted all boats in the commodity sector. Gold, copper, and oil all saw very impressive price gains. After the Great Recession of 2008-2009, very different dynamics have been driving each of these three commodities; please see Figure 1 on the next page. Gold has become highly sensitive to U.S. short-term interest rate expectations. Copper has become an indicator of the ebb and flow of the U.S.-China trade war. Oil has been disrupted by technological advances. In this report, we will delve deeper into the longer-term forces of financial panic, disruptive technology, and trade protectionism to get a better sense of why the correlation structure among key commodities may occasionally diverge sharply from its longer-term pattern only to return eventually back to form.

Figure 1



Source: Bloomberg Professional (GOLDS, LMACADY, USCRWTIC).
Chart created by CME Group Economics.

Lesson #1: December 2004 through June 2008 – Oil and Copper Depend on China to Lead Growth, Gold Constrained by Rates

The first crack in the mostly synchronized movements of gold, copper, and oil came in 2005 and lasted until the Great Recession hit. From end-1999 through end-2004, price performance was in the same ball park for gold (+52%), oil (+70%), and copper (+76%). From end-2004 through the middle of 2008, gold did rally another 111%, but copper took off for 166%, and oil led the way with a gain of 222%. The difference in performance was mostly attributable to two things. First, demand for the industrial commodities, such as oil and copper, continued to benefit from the impressive real gross domestic product growth of China, which sustained its superlative growth, posting 10%-plus annual gains, and lifting many other emerging market countries with it. Gold, however, had to contend with the rising U.S. short-term interest rates, as the Federal Reserve under Chairman Greenspan, began to raise interest rates because it feared the housing boom would lead to rising inflation.

Lesson #2: July 2008 through February 2009 – Industrial Commodities Collapse, Rate Cuts Cushion Gold

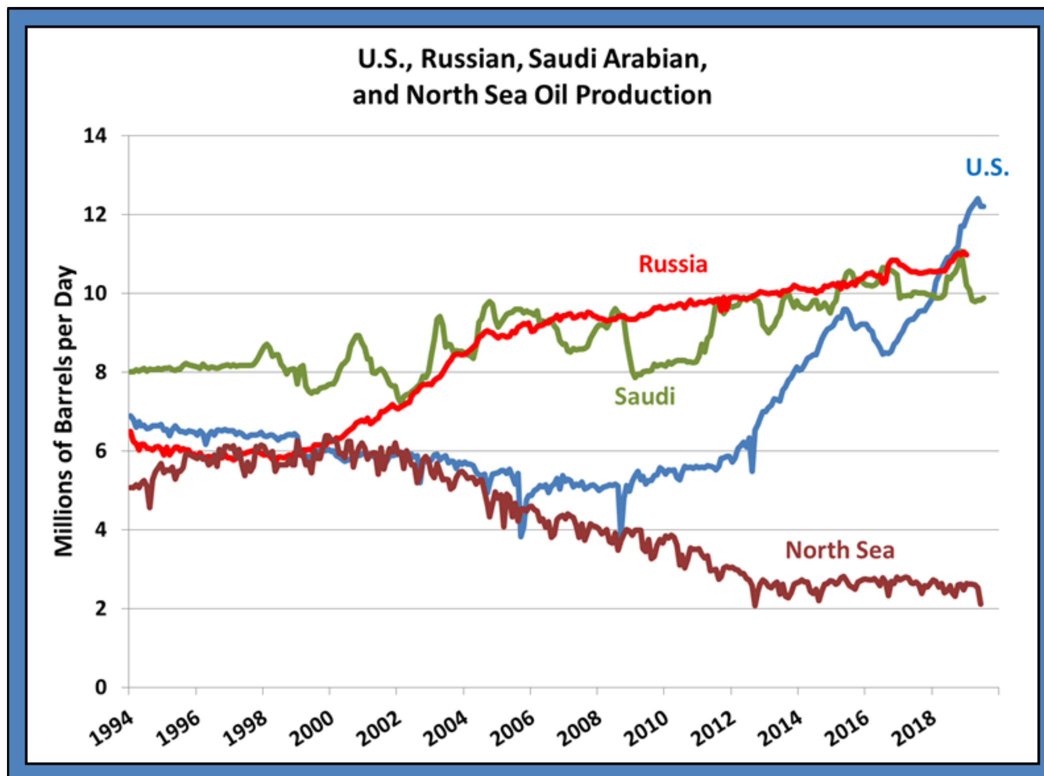
The financial panic hit hard in September 2008 with the very messy bankruptcy of Lehman Brothers and poorly managed bailout of AIG. Within months, the Federal Reserve, along with other major central banks, had lowered short-term rates to zero, and instituted asset buying (Fed) or lending programs (European Central Bank) to prevent the financial sector from collapsing and leading the global economy into a depression. With expectations of a severe global contraction taking hold, copper and oil prices both sunk by over 60% between July 2008 and March 2009. Gold held remarkably steady, showing a gain of just under 2%. Again, the lesson learnt was that the industrial commodities were highly sensitive to a shift in expectations from global economic growth to recession, but that rate cuts associated with the deteriorating economic conditions could cushion the gold price.

Lesson #3: Q4 2014 through early 2015 – Oil Gets Hit by Realization of the Impact of Disruptive Technology

Most commodities were in a downdraft in late 2014. Growth from China and other emerging market countries was decelerating. Hopes for a V-Shaped recovery in the U.S. and Europe from the Great Recession had been dashed. Most importantly, though, for oil was the realization by market participants that the Organization of the Petroleum Exporting Countries (OPEC) was no longer capable or willing to stabilize oil prices given the rapid growth of U.S. shale oil production based on the practical development and implementation of hydraulic fracturing methods. The moment of truth came at the end of November 2014, when OPEC decided it was not worth it to cut production to stem the fall of oil prices. During the short period from October 31, 2014 through March 17, 2015, oil prices collapsed by 46%, while gold (-2%) barely moved and copper (-14%) saw prices fall materially, yet nothing like what was happening in the oil market.

One of the more interesting lessons from the U.S. shale oil revolution is just how long it can take for a massive increase in supply to have any impact on prices. In the case of oil, there was this belief, ultimately proving unfounded, that OPEC could cut production enough to offset the U.S. shale oil revolution. Yet there were quite a few years of sharply rising U.S. oil production before a reckoning took place. Please see Figure 2 on the next page.

Figure 2



Source: Bloomberg Professional (DOETCRUD, OPCRSAUD, DWOPRUSS, PIWANORT).
Chart created by CME Group Economics.

OPEC has also been changed forever. Indeed, many market analysts now only focus on the big three oil producers – the U.S., Russia, and Saudi Arabia. This change of focus has been underscored by the willingness of Saudi Arabia and Russia to cooperate, despite Russia not being a formal member of OPEC. Added to the decline of OPEC's influence is the antipathy between Iran and Saudi Arabia, as well as the U.S. efforts to isolate Iran.

A final note on oil relates to the impact of Mideast tensions. When tankers were attacked and taken hostage in the Strait of Hormuz in the summer of 2019, oil prices rose a little, but not much; and certainly not even half as much as if the same escalation of tensions would have taken place a decade or more earlier. The capability of the U.S. to be a major global exporter of oil has simply rewritten oil dynamics.

Lesson #4: 2018-2019 – Trade War and U.S. Rate Cut Expectations

Gold's sensitivity to U.S. rate expectations was on display in the second half of 2018 and the first half of 2019, while oil and copper prices were stuck in the doldrums as the U.S.-China trade war rhetoric ebbed and flowed and it became apparent that the "temporary" tariffs used by the U.S. as threats to get a better deal were going to be permanent since no deal was in sight.

During the fourth quarter of 2018, expectations for the path of U.S. short-term rates changed dramatically. 2018 had commenced with the Fed guiding that it might raise rates four times in 2018, and then continue the rate rises as if on autopilot through 2019. In Q4-2018, as equities went into a swoon and U.S. President Trump lobbied for lower rates and not rate rises, the Fed changed its tune and guided at year-end 2018 that it was prepared to put rates on hold for all of 2019. During this period in the second half of 2018 when rate expectations underwent a major shift away from higher rates, gold rallied from $1200/ounce to above $1300.

Figure 3

Source: Bloomberg Professional (USGG2YR, FEDL01).
Chart created by CME Group Economics.

In the spring and summer of 2019, U.S. rate expectations underwent another major shift – moving from the "on hold" view to the likelihood of rate cuts in the second half of 2019 and into 2020. The shifts in rate expectations are illustrated in Figure 3. It is highly debatable whether the change of heart by the Fed was based on Presidential jawboning or the bond market screaming for rate cuts, but the change in policy was certainly not based on current economic data. When the Fed made the first cut in July 2019, U.S. unemployment was comfortably under 4%, inflation was hovering just below the Fed's 2% long-term target, and the U.S. expansion had just moved into record territory as the longest economic expansion ever.

One of the key factors cited by the Fed as a reason to cut rates was the anticipation of weaker economic activity around the world due to the ongoing U.S.-China trade war. The worsening of the trade war and realization that the tariffs already imposed would likely be permanent had cast a pall over global economic growth and trade expectations. So, gold was able to rally above $1400/ounce on the back of rate cut expectations, while copper and oil had to contend with a worsening picture for global demand. More specifically, over the period from end-August 2018 through end-July 2019, gold prices rose 20%, while copper prices fell 4% and oil prices fell 20%. The trade war was hitting copper and oil, and oil was hit harder due to rising U.S. production even as Mideast tensions worsened.

Bottom Line

- 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 often more focused on U.S. rate expectations.
- 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 leading to rising U.S. exports, even as oil still responds to the ebbs and flows of global growth.

Endnotes

Dr. Putnam discussed this paper’s topic at the JPMCC’s 3rd Annual International Commodities Symposium during the conference’s commodity industry panel session on August 13, 2019, which was moderated by the JPMCC’s Solich Scholar, Hilary Till. The symposium, in turn, was organized by Professor Jian Yang, Ph.D., CFA, the J.P. Morgan Endowed Chair and JPMCC Research Director at the University of Colorado Denver Business School.

Dr. Putnam is a regular contributor to the GCARD’s Economist’s Edge section.

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

Author Biography

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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 &

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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.