Quantix COMMODITIES | Commodities Research

The Case for a Tactical Allocation to Commodities amid the COVID-19 Crisis

By Dr. Daniel P. Ahn, Principal, KNOA and Senior Adviser, Quantix Commodities

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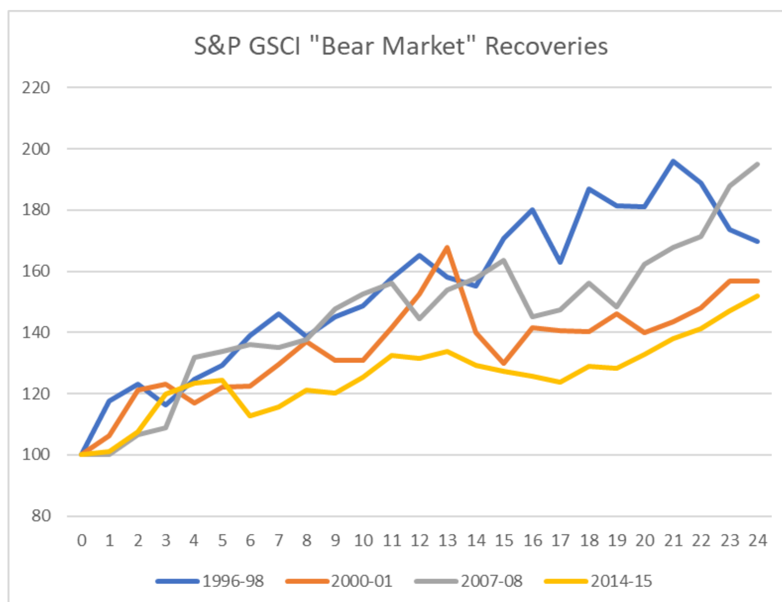
The COVID-19 pandemic and resulting "sudden stop" in the global economy is almost certainly the defining economic event of this decade, and possibly of the entire first half of the 21st Century. Never have the vulnerabilities of our interconnected economic system been as vividly and cruelly exposed. Economists are estimating that the U.S. economy contracted around 35% in annualized terms in the first half of 2020, even faster than the Great Depression. Unemployment is likely to peak at over 20-25%, leaving millions out of work. Cities are shut down, restaurant reservations have collapsed 100%, airport travel is down 90%, etc.

Of all markets that have been impacted by the economic carnage, commodity markets reflected it most starkly, with benchmark West Texas Intermediate (WTI) oil prices actually turning negative last month (hitting an intraday low of -$40/bbl on April 20), which every economist would say is conceptually impossible.

In such a seemingly inhospitable climate, it may sound odd to make an argument for a positive investment decision but that this precisely the point of this report.

It is indeed because of such circumstances that the case for an allocation to commodities has never been so compelling.

Figure 1: Recoveries from Commodity "Bear Markets" in the S&P GSCI, indexed at trough = 100



Source: Bloomberg, Author's calculations

Historically, there has been five commodity “bear markets” since 1990, which we define when commodity indices (e.g. the S&P GSCI) fall over 30% from its previous peak:

1. the 1996-98 Asian Financial Crisis and Russian debt default
2. the 2000-01 recession
3. the 2007-08 Global Financial Crisis and Great Recession
4. the 2014-15 oil price collapse from the fracking revolution, and lastly
5. the current COVID-19 “Great Suppression”

Figure 1 shows the behavior of the index from its trough to its subsequent recovery. In almost every instance, the index rebounded at least +50% or more from its lows within 12 months of the previous peak. Even the weakest recovery, which occurred in the aftermath of 2014-15 shale revolution, saw a 50%+ rebound within 24 months. The relatively weaker response was because 2014-15 was exceptionally driven almost purely by supply considerations, notably a technological breakthrough in hydraulic fracturing and horizontal drilling of shale/tight oil, instead of a collapse in demand.

This time around, there are at least three additional reasons to anticipate that the price recovery should be particularly marked, reinforcing the investment case. First, macroeconomic activity, currently artificially suppressed, will inevitably rebound once lockdowns are over. Second, these commodity price lows are historically unprecedented but, by their very nature, self-correcting through responses in both demand and supply fundamentals and inventory infrastructure. Third, the crisis has spurred governments to unleash unprecedented fiscal and monetary stimulus that should be inflationary and create the foundations for a new higher nominal price equilibrium.

We discuss each of these reasons in more detail in the following sections:

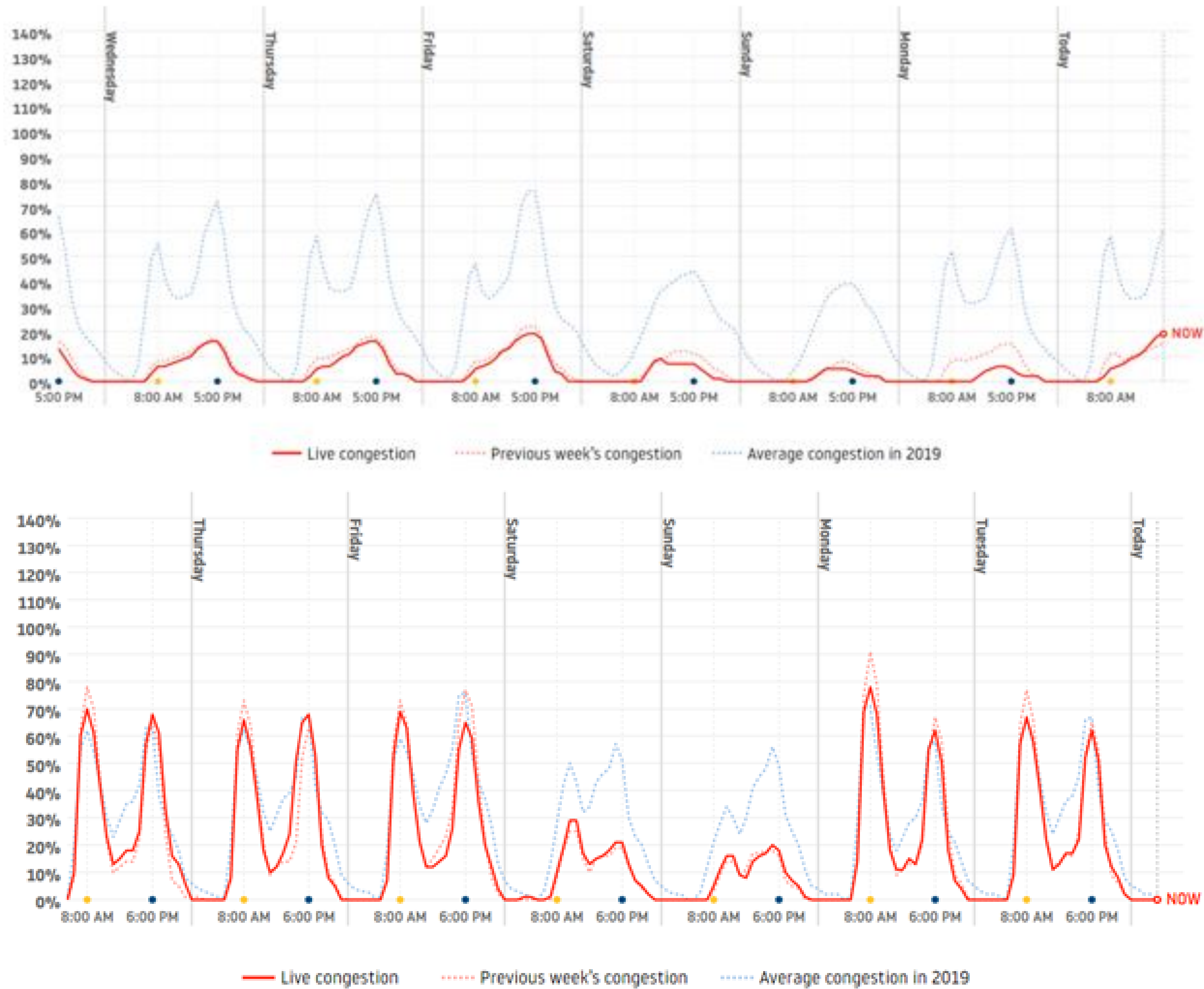
1. The inevitable rebound in macroeconomic activity and commodity usage

As mentioned above, this Great Suppression has caused much of everyday economic activity, from driving to dining at restaurants, to come to a screeching halt. This has caused the demand for the various commodities humanity uses to drive our economy and lifestyle, from energy commodities such as oil and natural gas to base metals such as copper and iron ore and even agricultural commodities such as beef, to also collapse and their respective prices to plunge. But this phenomenon would also work in reverse.

The collapse in economic activity is deliberate in nature, driven by the social distancing behavior implemented by households and guided by medical and municipal policymakers. While the exact duration of the lockdowns remains uncertain, eventually the economy has to restart and commodity demand should return, restoring support to prices. Ideally, a vaccine would be ready in short-order to allow societies to reopen fully and safely, but even in the absence of a vetted vaccine, policymakers are clearly under pressure to allow reopening and revive their economies.

In fact, this is already been seen in places such as China, where the central government has restarted the economy after imposing a nation-wide lockdown. True to form, traffic in places such as Beijing have returned back to pre-crisis conditions, with gasoline and diesel demand following; we should expect such commodity-intensive activity to rebound in other cities such as New York City as lockdown measures ease (see Figure 2).

Figure 2: Traffic Congestion in NYC (top) vs. Beijing, China (bottom) from May 17-23, 2020

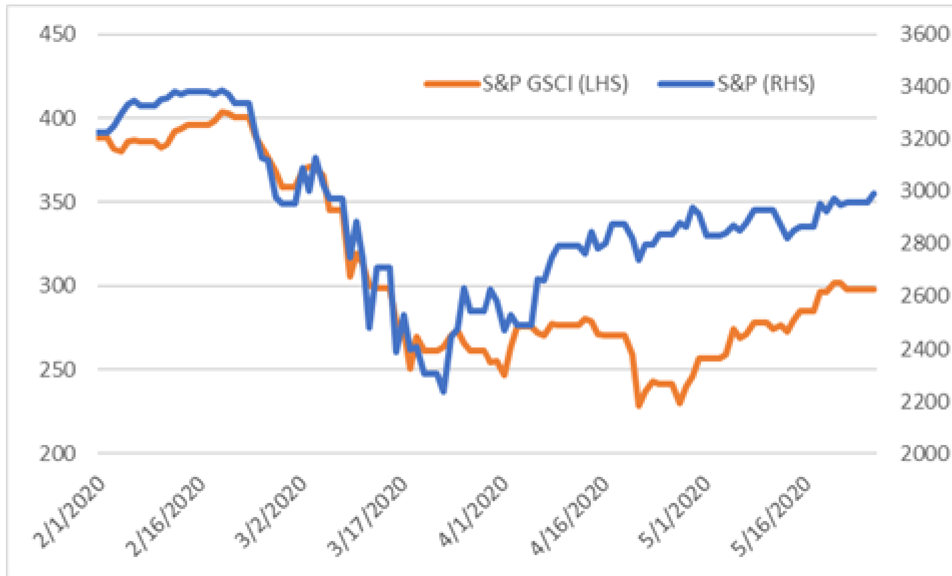


Source: TomTom

Indeed, no matter what you project about the extent and severity of the recession and its overhang, commodities as spot assets should rebound more strongly than more forward-looking economic assets such as equities, since commodities are linked to "necessities" fundamental to basic human livelihood, such as access to food, shelter, energy, and tools. A consumer in a post-COVID-19 economy may decide to forgo traveling abroad, going to eat at a restaurant, or staying at a hotel, but they will still need to eat, heat their home, use electricity, etc. Therefore, airline companies, restaurants, and hotels may suffer wrenching dislocations and, sadly, many will go bankrupt but the underlying demand for commodities is still there.

Indeed, forward-looking equity markets are already pricing in this re-opening of the economy and commodity markets should follow as demand returns (Figure 3).

Figure 3: S&P 500 vs. S&P GSCI Index, February 2020 to present



Source: Bloomberg

2. **Commodity price lows are self-correcting in their supply responses**

The second reason has to do the self-correcting nature of commodity prices, particularly through the supply response. In every major shift in commodity prices, there is also sown the seeds of its own reversal, which is why commodity prices tend to be mean-reverting in the long-term. For example, we see in Figure 4 that monthly oil prices rarely fall below $30 per barrel and have fallen below $20 per barrel only twice since 1984, once in the 1996-98 Asian financial crisis and again during the coronavirus crisis. The last time oil dipped below $20 it reverted quickly, doubling in less than 2 years.

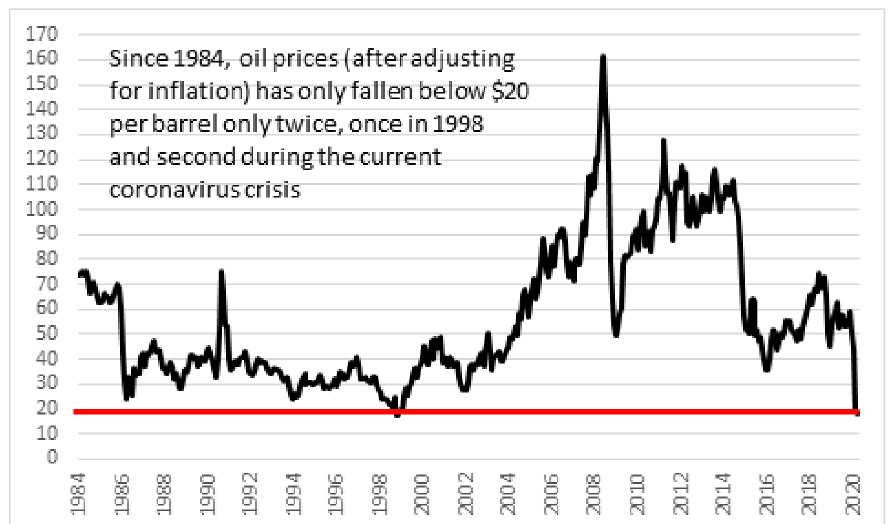
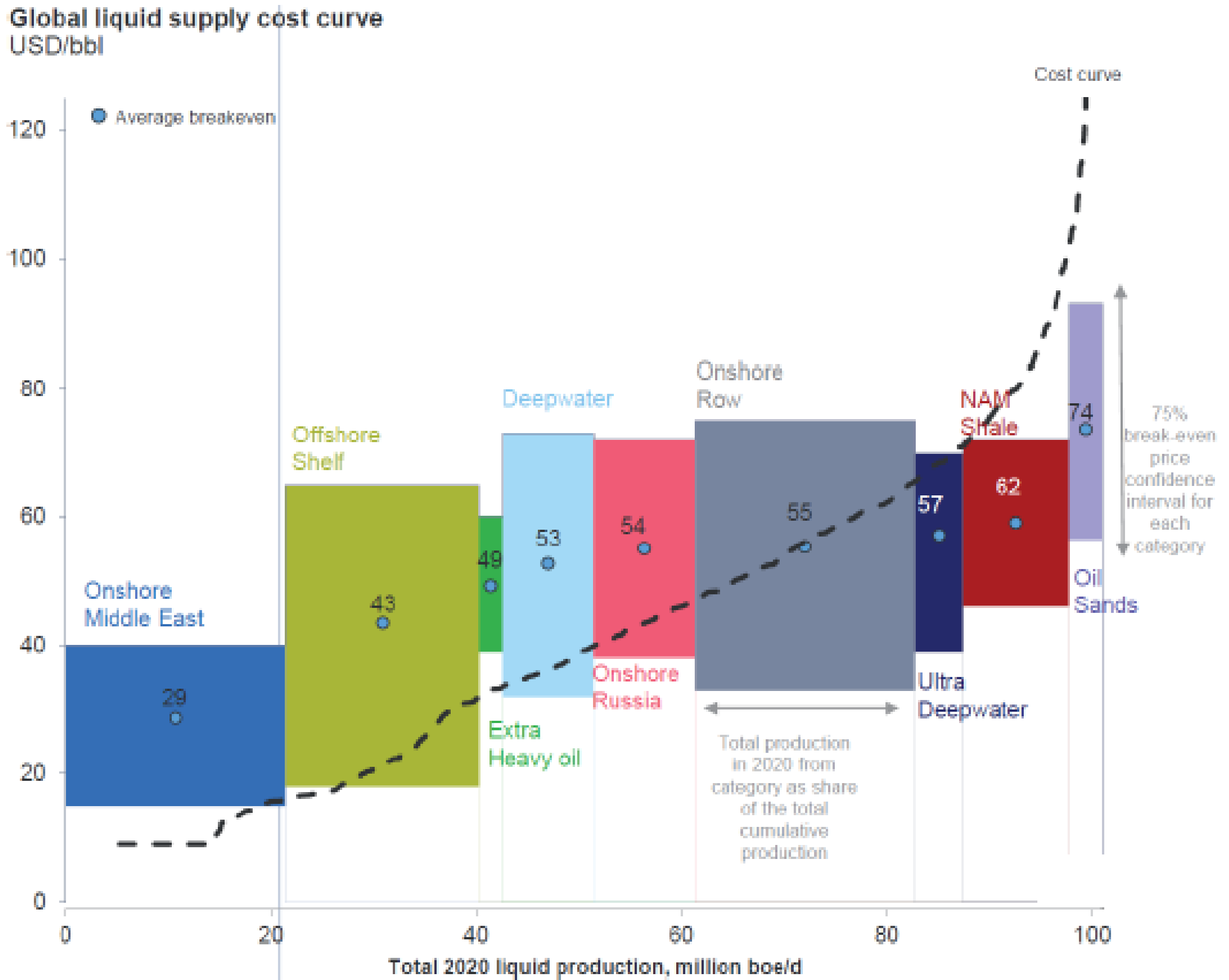


Figure 4: Real inflation-adjusted monthly oil prices since 1984

Sources: Bloomberg, US BLS

This is because most of global oil production is not economically viable at prices below $20 per barrel. We see in Figure 5 a rough picture of the "break-even" market oil price necessary to make different sets of oil production economical. With the large exception of onshore production from the Middle East (e.g. Saudi Arabia, Kuwait, etc.) much of the rest of world production, including North American shale production is not profitable at current prices.

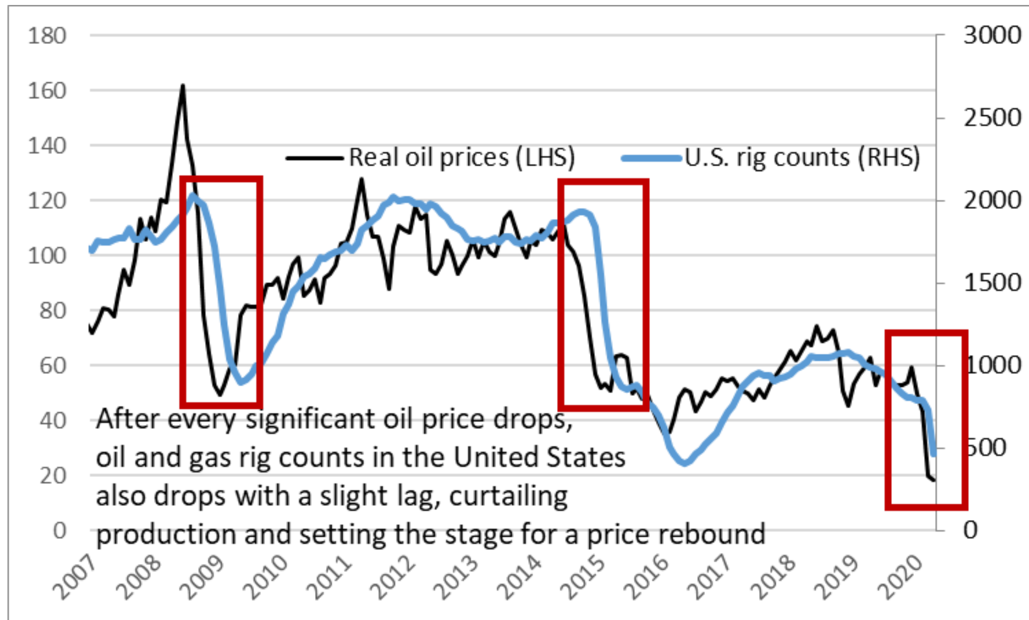
Figure 5: Global oil production "break-even" prices



Sources: Rystad Energy, IMF

Indeed, because of this, we have seen the number of oil and gas rigs used in production in the United States plummet over 50% since the end of 2018, setting the stage for a significant contraction in U.S. supply (Figure 6). Also, the Organization of Petroleum Exporting Countries (OPEC) and Russia have also agreed to voluntarily curtail production to drain the oversupplied oil market.

Figure 6: US real oil prices and U.S. total oil & gas rig counts



Source: Bloomberg, US BLS, Baker Hughes

While immediately painful to producers, this supply response ultimately restores some balance to markets and sets the stage for a recovery in prices. And while we have focused this discussion on oil and natural gas as they have the highest weight in most commodity indices and have the best data transparency, the same logic applies to other commodities across the base metals and agricultural complex. Indeed, many of these commodities are also highly correlated because their production processes are intertwined. For instance, metallic ore mining, ore smelting, and fertilizer production used for modern agriculture are all highly energy intensive, and as the price of energy itself goes up, so does the prices of others across the broader commodity complex.

In the longer-term, one can argue that this coronavirus may have consolidated the incumbent position of several currently traded commodities in popular financial indices. For example, prior to the coronavirus recession, there was a widespread consensus that fossil fuels such as coal, oil, and natural gas were being displaced in favor of renewable energy sources such as solar and wind.

But the technologies and economics of these renewable sources are riskier than traditional fuel sources and, in the current recessionary environment, many utilities and other firms have reduced exposure to risk. Consulting firm Wood Mackenzie estimates, for example, that new solar installations could be 17% lower and wind turbine manufacturing as much as 20% lower, as firms turn away from riskier energy sources to tried-and-true methods. Rooftop solar installation and activity for electric vehicle startups in particular have plummeted for the moment. This may ultimately defer or delay the longer-term energy transition, supporting the longer-term price for crude oil and natural gas.

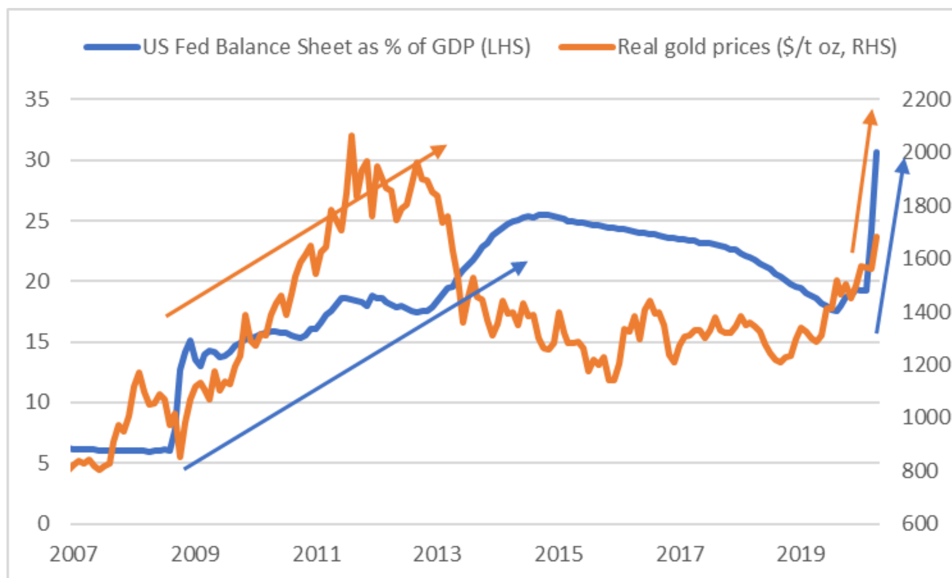
3. **Governments are deploying unprecedented fiscal and monetary stimulus**

Our last reason that an investment in commodities is so compelling in the current environment has to do with the nature of the government economic policies in response to the coronavirus crisis. With societies in lockdown and the likelihood of widespread household and business distress, governments around the world have unleashed massive fiscal and monetary economic relief packages to support the economy.

In the United States, Congress and the Trump administration have unveiled at least three major fiscal packages totaling approximately $2.8 trillion in total cost (or about 14% of GDP) and is currently negotiating another package that may add another $3 trillion. This massive spending, together with collapsing federal tax revenue, is causing both U.S. federal deficits and federal debt levels to balloon. The U.S. Congressional Budget Office (CBO) is, as of writing, projecting that the federal deficit will be $3.7 trillion in Fiscal Year 2020 and the overall debt will hit about 101% of GDP at the end of 2020. By the end of Fiscal Year 2021, the CBO projects the U.S. federal debt will hit 108% of GDP, the highest it has ever been in U.S. history, exceeding the debt level peaks seen in World War II. Likely these numbers should rise even higher if the recession deepens and more spending legislation is passed.

This unprecedented surge in national borrowing and indebtedness is combining with monetary bazookas unleashed by the U.S. Federal Reserve. Early on, the Fed pushed its target short-term interest rates to zero. Then, it announced unlimited amounts of balance sheet expansion (aka quantitative easing or QE) alongside a slew of liquidity and credit facilities to support the economy. Figure 7 shows the unprecedented speed in which the Fed's balance sheets have rocketed up from below 20% of GDP to over 30% of GDP, i.e. over $2 trillion in quantitative easing. And it will likely continue to grow as the economy continues to suffer and markets need support and liquidity.

Figure 7: Real inflation-adjusted gold prices and U.S. Federal Reserve balance sheet (as % of GDP), 2007 to present



Source: Bloomberg, US BLS, Federal Reserve, US BEA

What does this have to do with commodities? Because all of these policies are inherently inflationary, as the U.S. government is increasingly resorting to deficit financing and relying upon its own central bank to buy out the U.S. debt issuances. But this debt monetization results in longer-term inflation, as seen in famous historical examples such as during the French Revolution or Weimar Republic Germany in the 1920s. More recently, Venezuela is experiencing a bout of hyperinflation.

While we are not necessarily predicting hyperinflation in the United States, the combination of massive fiscal spending and massive QE is creating the ingredients for a potentially significant bout of inflation, only temporarily suppressed by the ongoing lockdowns and recessions.

As our previous study The Role of Commodities as a Strategic Asset Class, November 2018 lays out in more detail, commodities are a natural strategic hedge against inflation due to their real physical nature, causing their nominal prices to rise in conjunction with the reduced purchasing power of each U.S. dollar as inflation bites. Gold in particular shines in this aspect, as it is less linked to direct demand and supply and serves more as a pure financial and currency hedge against inflation. Indeed, gold prices soared in the aftermath of the Great Recession and the first episode of Fed quantitative easing. All signs are that we are in for an even more pronounced round of quantitative easing this time around.

Conclusion

The COVID-19 pandemic and related Great Suppression is an immensely dislocating economic phenomenon that has wreaked havoc in financial markets and investor portfolios. Yet in these dark times, the case for allocating to commodities has never been more compelling on an absolute basis, and even relative to other asset classes like equities, bond, credit, and real estate. Demand for commodities will surely rebound as societies emerge from lockdown, as they are tied to the very essentials of life. The sharpness of the recent commodity price collapse is already causing significant supply reactions that would restore balance to currently oversupplied markets. Lastly, the unprecedented combination of fiscal deficit spending and monetary balance sheet expansion, both in the United States and abroad, are inherently inflationary and therefore, heighten the long-term attractiveness of natural inflation hedges like commodities, particularly precious metals.

The COVID-19 pandemic is creating an unprecedented once-in-a-generation window of opportunity to seek investment exposure to commodities as an asset class.

Appendix

Biography

Dr. Daniel P. Ahn is a Managing Director, the Chief U.S. Economist, and Head of Markets 360 – North America at BNP Paribas in New York. He is also a non-residential Global Fellow at the Woodrow Wilson International Center for Scholars.

Until 2018, he was the chief economist at the U.S. Department of State, where he advised the Secretary of State and senior principals on a wide range of international economic and security topics relevant to U.S. foreign policy, including global macroeconomic growth, financial stability, economic sanctions, international trade, and energy and environmental issues.

Prior to entering public service in 2014, Dr. Ahn was the chief economist for energy and commodities at Citigroup in New York and also held senior positions at Citadel, Barclays Capital, and Lehman Brothers. He has held research and teaching positions at Harvard University, the National Bureau of Economic Research, Columbia University, the Council on Foreign Relations, the International Monetary Fund, Johns Hopkins School of Advanced International Studies, Georgetown University, and the U.S. Federal Reserve Board of Governors.

He is the author of multiple research articles, Congressional testimony, and a textbook, Principles of Commodity Economics and Finance with MIT Press.

Dr. Ahn has extensive experience using state-of-the-art econometrics, data science, geospatial imagery, and machine-learning for economic forecasting, data analysis, financial risk management, project financing, commercial strategy, public policy, and operational solutions.

He was featured in Forbes Magazine as one of 30 under 30 in Finance. He is the recipient of both the Superior Honor Award and the Meritorious Honor Award from the U.S. Department of State.

He completed his A.B. in economics and finance with honors from Princeton University, and his Ph.D. in economics from Harvard University.

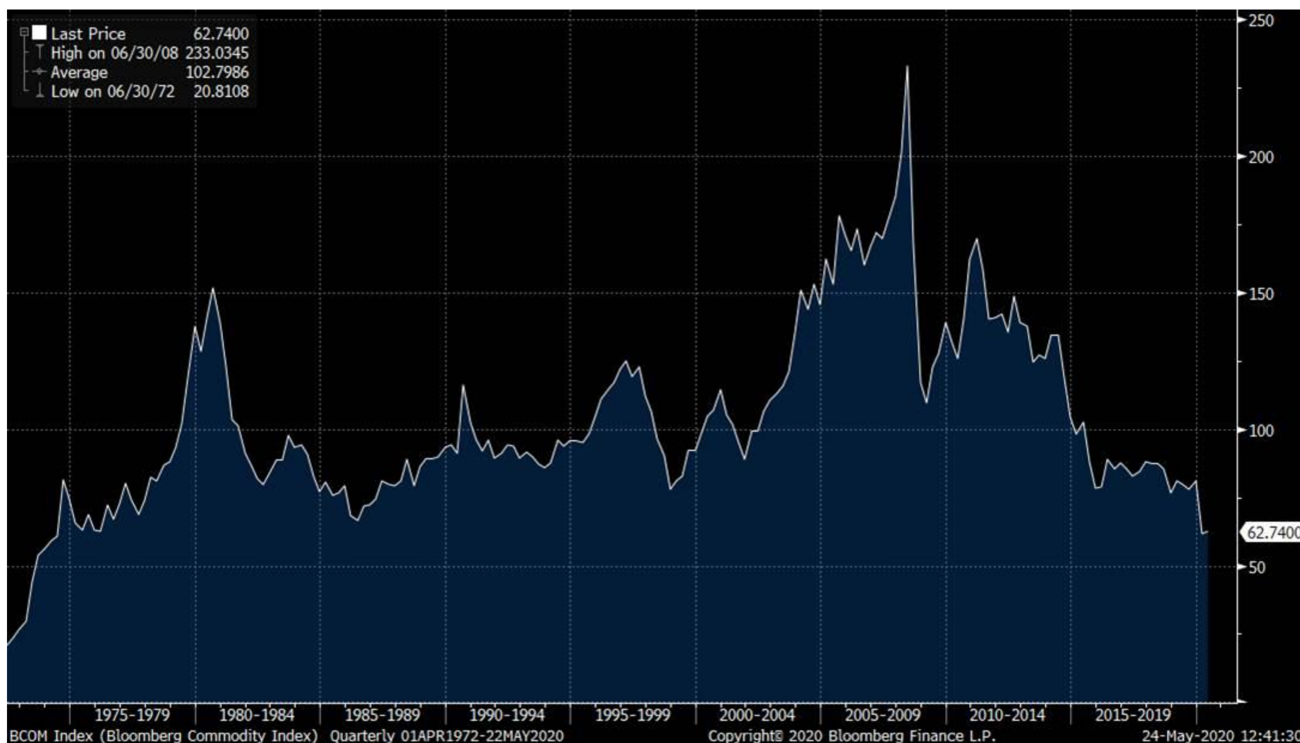
Cover letter from Don Casturo, CIO of Quantix Commodities LP

May 28th, 2020

Dear Investor,

As is often the case, periods of market turmoil bring attention to commodities as an asset class. This is especially true when prices go to historical extremes. By now, virtually everyone is aware that benchmark WTI oil prices went negative in April for the first time ever. In addition, beyond oil, the demand shock to other commodities caused by the coronavirus pandemic brought commodity benchmark indices to 45 year lows!

Figure 1: BCOM Index performance, Source: Bloomberg



While the Quantix Commodity Alpha (“QCA”) strategy is designed to be non-directional and deliver all-weather returns in any commodity price environment, there are inevitably many investors that are attracted to trading a directional view on commodities and are tempted by charts like this to play for a rebound in prices.

The recent massive inflows into products like USO (United States Oil Fund, a long-only oil ETF) and GLD (SPDR Gold Shares, a long-only gold ETF) are evidence of the capital that is now betting for commodity prices to rise.

Figure 2: United States Oil ("USO") Market Cap
Source: Bloomberg

Figure 3: SPDR Gold Trust ("GLD") Market Cap
Source: Bloomberg

This inflow of capital is not surprising. Indeed, we believe there are compelling reasons to consider a tactical allocation to commodities in the current market environment. In this special report by Dr. Daniel Ahn, noted economist and commodity consultant, he identifies 3 keys points to support the compelling case for a tactical investment in commodities:

1. **The inevitable rebound in macroeconomic activity and commodity usage**
2. **Commodity price lows are self-correcting in their supply responses**
3. **Governments are deploying unprecedented fiscal and monetary stimulus**

In order to profit fully from this view, it is critical that investors consider the proper expression. In commodity markets, especially, the choice of product to gain exposure to a directional investment thesis can be just as important as the view itself.

To illustrate this, Figure 4 shows the returns of 3 long-only oil product alternatives (BCOM Crude Oil index, GSCI Crude Oil index and USO) since the start of 2020.

Figure 4: 2020 Year-To-Date Performance of Different Oil Exposures, Source: Bloomberg

While all of the above products had the same dollar notional exposure to oil at the start of the period, they have dramatically different returns with USO significantly underperforming the BCOM Crude Oil index. *For those investors we mentioned above who have used USO to gain exposure to oil in the last few weeks, they have underperformed the BCOM Crude Oil index by over 11% from 01-May-20 through 27-May-20, and by over 34% since April 1st!*

This is due to a feature that is unique to commodities and is often misunderstood by investors. Since most commodity investments products derive their exposure from futures contracts, they are exposed to the varying shape of commodity futures curves. The choice of contract and how it is “rolled’” to more deferred contracts to maintain the exposure can result in significant performance differences between products.

Despite typically having a more stable futures curve, a similar dynamic is also playing out in Gold. The majority of recent speculative capital is accessing the market via the COMEX gold contracts and this has led to some unprecedented distortions in gold markets. Along with some COVID-19 related factory shutdowns, this has meant that the usually stable relationship between COMEX gold contracts and London based physical gold (Exchange for Physical, the “EFP”) has recently traded as high as $70/oz, over 4% of the underlying price.

Figure 5: COMEX gold contracts and Physical Gold, Source: Bloomberg

In addition, the weight of speculative activity in prompt COMEX contracts has led to steep discounts in 1st/2nd nearby gold spreads over the last two contract rolls as these positions are moved forward.

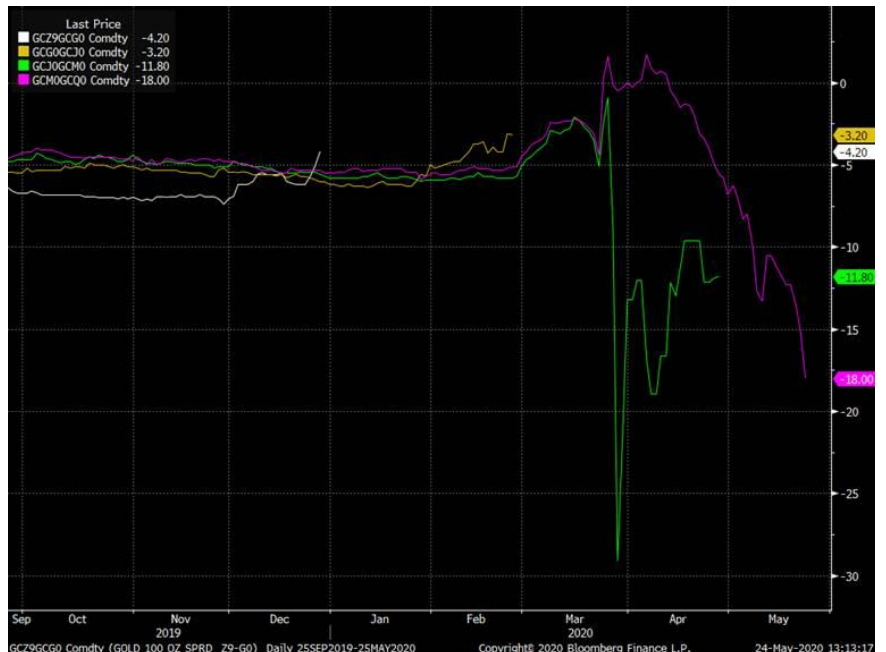


Figure 6: Nearby Gold Spreads, Source: Bloomberg

These examples illustrate some of the complexities of commodity markets and why we believe a deep understanding of these aspects is critical to deliver desired investment objectives in the space.

The Quantix team specializes in delivering what we believe are efficient ways to gain exposure to the asset class; in our QCA strategy, we aim to generate uncorrelated, relative value returns. The level of dispersion in the oil chart in Figure 4 above suggests the potential for this type of strategy is only enhanced by the recent inflows into static, flawed products such as ETFs.

Equally, those investors that are looking for a more efficient way to express a directional commodity view can also take advantage of the Quantix expertise. We deploy a long-only application of our strategies to gain exposure to broad commodity benchmarks in the Quantix Optimal Commodities ("QOC") strategy. QOC is primarily targeted at investors with a strategic allocation to the asset class (see Dr. Ahn's publication from November 2018: "The Role of Commodities as a Strategic Asset Class") but the same Quantix expertise can be brought to bear for bespoke tactical applications.

In fact, QOC is made up of customized individual commodity strategies and, with sufficient interest and due to Quantix's institutional quality infrastructure, we can easily tailor products (either managed accounts or commingled funds) designed to provide exposure to broad indices, specific sectors, or even single commodities.

Whether your commodity interest is strategic or more tactical, please contact us to discuss how your portfolio can benefit from the Quantix expertise.

Sincerely,

Don Casturo

Quantix Commodities CIO

Quantix COMMODITIES

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Limited liquidity. Opportunities for withdrawal/redemption and transferability of fund interests are restricted, so investors may not have access to capital when it is needed. There is no secondary market for the interests and none is expected to develop.

Investment and trading risks in general. An investment in the fund is speculative and involves a high degree of risk. No guarantee or representation is made that the fund's investment objectives will be achieved. An investor should not make an investment, unless it is prepared to lose all or a substantial portion of its investment.

Leverage and concentration risks. The fund's portfolio, which is under the sole trading authority of the general partner/investment manager, is primarily concentrated in commodities and this lack of diversification may result in higher risk. A portion of the trades executed may take place on non-U.S. Exchanges. Leverage may be employed in the portfolio, and is inherent in certain portfolio investments, which can make investment performance volatile.

Tax and regulatory considerations. A private fund is generally not subject to the same regulatory oversight and/or regulatory requirements as a mutual fund. Neither of the funds is required and neither intends to register as an investment company under the investment company act of 1940, as amended (the "company act"), and, accordingly, the provisions of the company act will not be applicable. Interests in the funds have not been registered under the securities act of 1933, as amended, or the securities laws of any state and are being offered and sold in reliance on exemptions from the registration requirements of said act and laws. Further, fund investments may involve complex tax structures resulting in delays in distributing important tax information. Parties should independently investigate any investment strategy or manager, and should consult with qualified investment, legal and tax professionals before making any investment.

Fees and expenses. The fees and expenses charged in connection with this investment may be higher than the fees and expenses of other investment alternatives and may offset profits. In addition, the performance based compensation may create an incentive for the investment manager to cause the fund to make investments that are riskier or more speculative than it would otherwise make.

Conflicts of interest. The funds will be subject to a number of actual and potential conflicts of interest involving the investment manager and its affiliates. However, the investment manager and its affiliates have substantial incentives to see the assets of the funds appreciate in value, and merely because an actual or potential conflict of interest exists does not mean that it will be acted upon to the detriment of the funds. Please review the applicable CPOM for a more detailed discussion of potential conflicts of interest.

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